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Crude Price Increase Is Expected Soon

Highest production in 1930, week ending Feb. 22, average daily output 2,699,096 bbls. Peak of U. S. production, week ending Aug. 24, 1929, average 2,975,435 bbls.

Stabilized Production and Stronger Gasoline Market in Mid-Continent Area Will Bring Readjustment Upward

By Andrew M. Rowley

Lowest daily average crude oil production in the United States during 1930 was for week ending Dec. 27 with average output of 2,144,074 bbls.

Steady improvement is being shown in the oil industry, a condition becoming recognized more and more by all branches of the business. Even those long regarded as confirmed pessimists now admit "things look a lot better." Further strengthening of the gasoline market in the Mid-Continent area is regarded as removing the last obstacle to an advance in crude oil prices in that territory at least.

An upward revision of the posted schedule of crude oil prices is expected to be announced within the near future. Many companies feel better prices for crude have been warranted for a long time and that there is no longer any reason for delaying the adjustment. Production has been stabilized on a sound basis and the improved tone of the gasoline market makes imminent a crude price increase.

The plan to place development of the East Texas fields on an acreage unit basis will serve further to stabilize conditions in that area and eliminate the necessity of constantly reducing the allowable production per well. In the meantime, while the plan is being worked out and placed before the Texas Railroad Commission for approval, the well allowable has been reduced to 150 barrels, effective October 29, so the output of the area will be held around the 400,000-barrel per day mark which has been set as the most equitable for operators there and the industry as a whole.

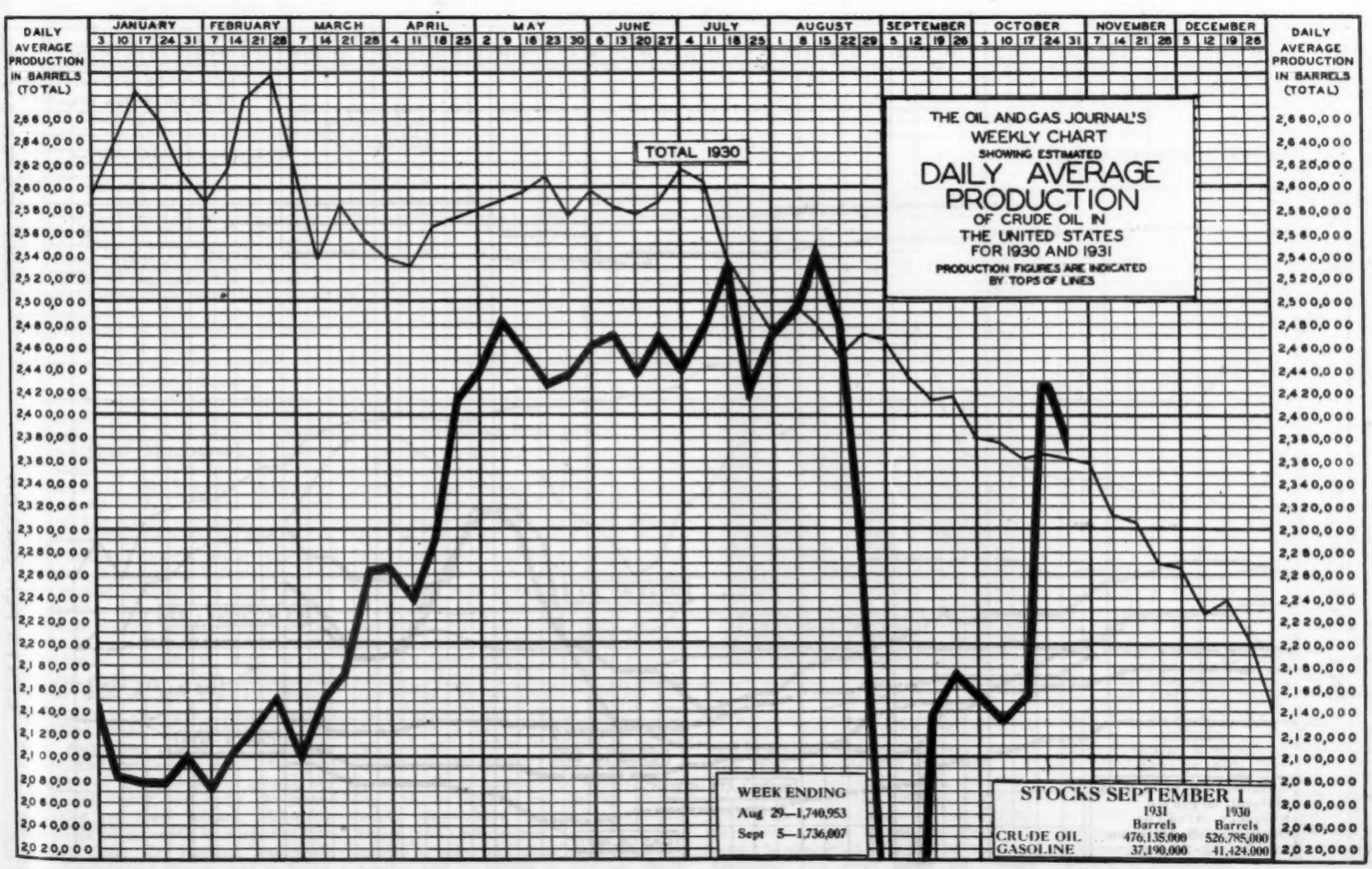
The outlook for the petroleum industry is far more promising than it has been for over a year. There is no excess of crude oil available to markets. This condition probably will obtain throughout the winter, permitting the industry to enter next year on the best basis, statistically at least, it has enjoyed for years. Conservative drilling campaigns then will be in order to create future reserves as surveys which already have been made indicate present developed fields cannot supply requirements for more than 10 to 12 years. For an industry with an investment of more than $12,000,000,000, this is a very short time. Operating companies must protect their own interests by insuring supplies of crude oil for future years.

PRODUCTION IN THE UNITED STATES

Estimated daily average production of crude oil in the United States for week ended October 24 and a comparison with the previous week follows:

	Oct. 24	Oct. 17
Oklahoma—		
Oklahoma City	143,235	165,715
Seminole-St. Louis	122,290	122,360
Remainder of State	216,585	217,140
Total Oklahoma	482,110	505,215
East Texas—		
Kilgore	149,957	160,513
Lathrop	111,990	113,331
Joiner	138,341	148,345
Total East Texas	400,288	422,189
West Texas	196,004	202,487
North Central Texas	84,474	80,416
Texas Panhandle	65,089	64,918
East Central Texas	56,265	56,195
North Louisiana	29,510	29,505
Arkansas	37,970	37,970
Kansas	101,945	101,670
Total Mid-Continent area	1,453,655	1,500,565
Gulf Coast—Texas	119,348	118,256
Gulf Coast—Louisiana	27,256	30,335
Southwest Texas	61,732	62,955
Eastern	116,000	116,000
Rocky Mountain area	94,683	92,759
California—		
Santa Fe Springs	60,000	60,000
Long Beach	76,250	74,750
Playa Del Rey	22,000	20,750
Elwood	25,500	24,750
Kettleman Hills	58,500	64,000
Remainder of State	265,250	263,750
Total California	507,500	508,000
Total United States	2,380,174	2,428,870

→ **Decrease 48,696 Bbls. Daily** ←



Continued Strength in Oklahoma Market

U. S. Motor Gasoline Advances to a Low of 4 Cents With Half-Cent Advance in Natural Gasolines

By C. O. Willson

The refinery market in Oklahoma (Group 3) continued to reflect general strength in all the principal products over the past week and several price advances materialized.

The U. S. Motor grade of refinery gasoline advanced to a low of 4 cents the first of the week with several of the larger refiners in the State quoting to 4½ cents on interstate shipments. Similar advances were made in most of the higher gravity grades. Despite efforts made by several manufacturers to prevent additional advances in their products all grades of natural gasoline advanced to a low of 4¾ cents on Tuesday with practically no material available for immediate shipment over the balance of the month.

Other price advances included the establishment of a low of 1¾ cents in open market sales of 38-40 gravity, low cold test and low flash furnace oils. The higher gravity fuels of low cold test are also quoted from 2½ to 5 cents a barrel more than last week with the entire fuel oil and gas oil list generally strong. Kerosenes were expected to advance before the end of the week, a development which appeared assured when inland Texas quotations passed the Oklahoma price the first of the week.

The strength shown in Oklahoma and Mid-Continent markets over the past week is due to the same conditions that have made possible the steady recovery since the first of the month. The curtailed operations of refineries with a number of shut down plants in Texas has reduced the quantity of material available, particularly on the day to day open market. Several of the refiners who were most active in the spot market during the summer and early fall months have either shut down their plants or reduced their crude oil runs to stills to the point where this output is absorbed by regular customers and they are not compelled to offer shipments on the open market.

A few of the larger refiners who have reduced the operations of their plants continue to purchase excess gasoline whenever it is offered and the purchases are consigned to their own stations or their regular jobber customers. In the case of fuel oils, gas oils and furnace oils, the strength in prices reflects an improved seasonal demand with a smaller supply than most of the buyers had anticipated.

Expect Additional Advances

Many of the trade believe that the end has not been reached in advances for all grades of gasoline including natural gasoline. It is felt that the market will shortly have the additional impetus of higher posted crude oil prices and advances in gasoline tank wagon and service station quotations throughout the Middle West.

Of the two possible developments, the higher tank wagon and service station prices are of most concern to refiners although several take the position that they will not materialize until the higher prices for Mid-Continent crude oils are posted. As the situation now stands the refinery tank car prices in Oklahoma and other Mid-Continent areas have already advanced to the point where they are of little importance to a majority of the refiners who dispose of the bulk of their gasoline output either through their stations or through long time contracts with jobbers. In the case of contracts whether it is between the refining and marketing departments of the same company or between a refiner and independent jobber, the refiner usually guarantees a minimum spread of 5 cents between the delivered tank car price and the service station price at point of consumption.

If a study of these contracts is made at the consuming points listed on the Tank Wagon Market page of this issue for the 11 middle western states comprising the Standard of Indiana marketing territory, it will be found that with the 5-cent guarantee, the net back to the Oklahoma refiner is around 3.5 cents a gallon. In some cases the guarantee is as high as 6½ cents a gallon and these higher guarantees are of course reflected in the return to the refiner. Cases are cited where refiners are getting less than 2 cents per gallon in shipments of U. S. Motor gasoline to regular jobber customers.

Refiners are hoping for at least a 1-cent advance in gasoline tank wagon and service station schedules throughout the

(Continued on Page 103)

REFINED MARKET BAROMETER

The Mid-Continent and Middle West led in price advances on refined products during the past week. Both refinery gasolines and natural gasolines in those areas advanced steadily and all grades of fuels from low gravity industrial grades to prime white furnace oils were strong with important price advances. The same products were generally firm in other areas with some indications that quotations might shortly reflect the strength shown in the inland markets. The export market in refinery gasolines was stronger. A firmer tone in kerosenes was noted in several areas. Cylinder stock prices were advanced in East with no important changes in other areas. The wax market was unchanged.

Mid-Continent—Refinery gasolines and natural gasolines continued to advance. Scattered advances in several grades of fuel oil, gas oil and furnace oils. Kerosene prices advanced except in Oklahoma and Kansas. Demand for neutrals and bright stocks less active with no changes in prices.

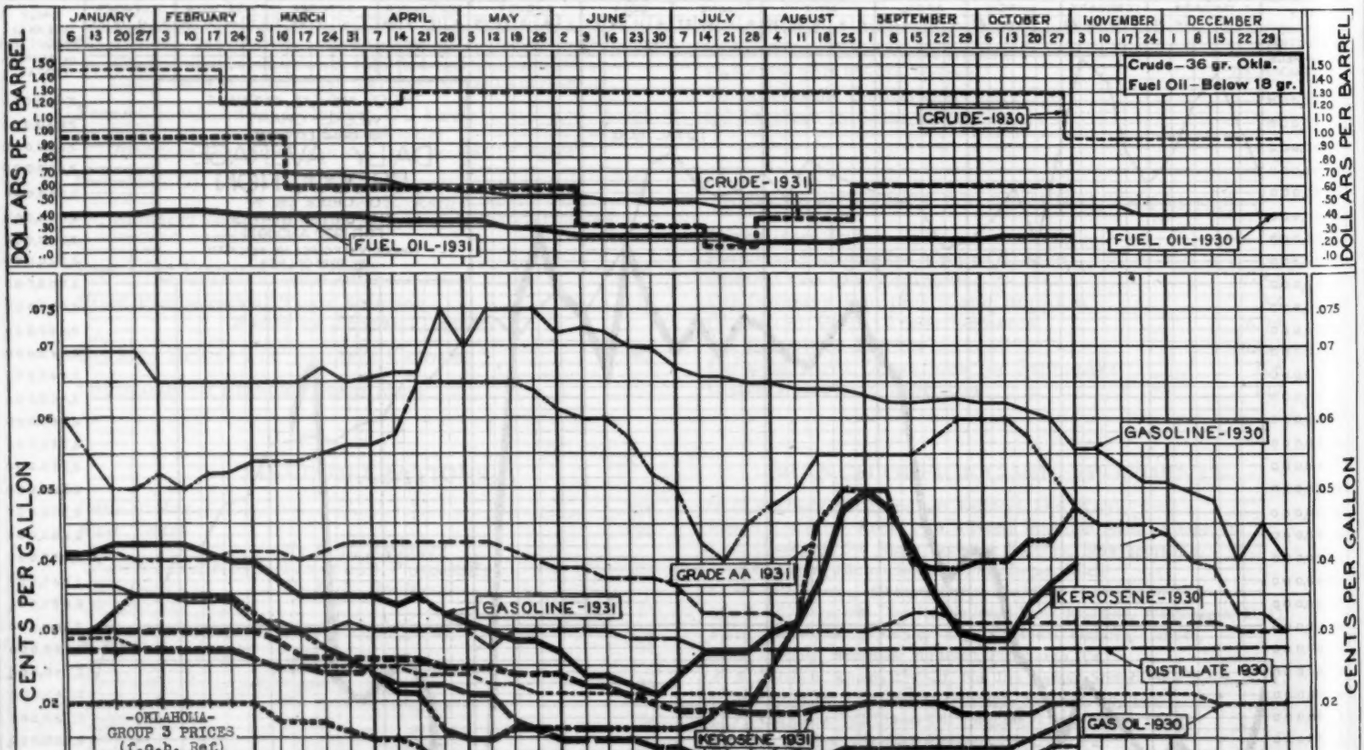
East Coast—No changes in gasoline market. Fuel oils and Diesel oil steady. Kerosene strong. Better demand for gas oil and furnace oil.

Pennsylvania—No important changes in gasoline and kerosene. Neutral oil and bright stock prices steady.

Chicago—Refinery gasolines advanced. Kerosene firm. Fuel oil, gas oil and furnace oil strong.

Gulf Coast—Market generally steady. U. S. Motor grade of gasoline for export movement advanced one-eighth cent. Good demand for lower viscosity neutral oils.

California—Better feeling in regard to gasoline with prediction that prices will be advanced. Other products unchanged.



Unit Acreage Basis for East Texas Area

Plan Proposed by Texas Oil and Gas Association to Be Presented to Railroad Commission. Cut to 150 Bbls. Meanwhile

By L. E. Bredberg

DALLAS, Tex., Oct. 27.—At a meeting held at the Baker Hotel today, approximately 80 men, representing an estimated 80 per cent of the companies and operators holding leases or production in East Texas, adopted a resolution endorsing the acreage plan for curtailment of drilling and production in that district.

A motion was also adopted to appoint a committee of seven to put the plan before the Railroad Commission of Texas and before all the producers and operators and have it adopted to displace the present per well basis plan of curtailment, which is not altogether necessary and which is not fitting into the situation due to so many wells being drilled and production increasing daily therefore, calling for recurtailment per well every three or four weeks in order to keep the production down to around 400,000 bbls. per day.

Edward T. Moore, president of the Simms Oil Co., Dallas, presided at the meeting, which was called by the Texas Oil and Gas Conservation Association, and various independent producers and company men expressed thir views of the plan as they were called upon or as they volunteered their opinions in an open discussion in which many questions were asked and different ideas were given.

Committee Named

The committee of seven appointed by Edward T. Moore, chairman of the morning's meeting is as follows: Charles F. Roeser, Fort Worth; Beeman Strong, H. L. Hunt, Tyler; J. R. Pearson, Tyler; J. Edgar Pew, Col. J. Lewis Thompson, Kilgore, and T. J. Donoghue, vice president of The Texas Company, Houston. This committee will have disciplinary powers and will prepare the acreage plan in written form, going before the Railroad Commission some time after October 29, waiting upon the outcome of the injunction hearing at Beaumont on that date.

Charles F. Roeser of Fort Worth, chairman of the association, outlined the plan as proposed and gave his reasons for desiring to see such a scheme adopted in East Texas. Mr. Roeser mentioned three requisites needed in curtailing drilling and production, first, the consideration of the landowner; second, the small lease owner, and lastly the larger companies and lease holders. "The district needs permanency in a plan of curtailment," said Mr. Roeser, "one workable a year from today as well as today, and other plans used to prevent rapid drilling and overproduction do not take this into consideration."

Plan as Outlined

As outlined the acreage plan would give permits to drill one well to every 40 acres which would allow approximately 160 bbls. per well based on an estimated 100,000 proven acres or around 4 bbls. per acre. This would give an absolutely equitable share of production to the landowner, according to Mr. Roeser. If the field was divided into 100-acre units this would insure each well 400 bbls. per day. According to the plan, however, 40-acre units will no doubt be adopted for use in the plan. Any tract less than 20 acres would be given a 20-acre allowable. This, however, would have to coincide with the order issued as of September 15 and would not permit acreage to be cut up into smaller units after that date, tending to give more production per larger leases so divided.

The plan would benefit the small tract owner who also owns production or leases in other fields in the State or other states due to the fact that it would save him money from unnecessary drilling, stabilizing East Texas and the market in this State and in the entire industry.

Blaine Johnson, of the Simms Oil Co., asked if there would be any concession made to the producers who own leases on the western edge of the field near the water line but Mr. Roeser said, "no," that those owners would gain by such a proposed plan of curtailment, less drilling helping to keep down water encroachment from these wells but any operator drilling outside of the present estimated water area would be given concession in the production of such a lease, another problem being present.

It was suggested that a minute survey of water and producing acreage should be made by a committee of engineers working under supervision of the Railroad Commission to arrive at the nearest possible limits of production, the presence of water and amount of potential producing acreage.

Mr. Roeser stated he would like to see an even flow of production from the wells producing the full 24 hours per day but W. L. Todd, president of the Columbia Oil & Gas Co., took exception to this, stating that paraffining gave more trouble when wells were allowed to flow the entire day and but a small amount per hour. He said that opening the wells to about 50 bbls. per hour and letting them produce the allowable limit in a short time prevented paraffining. This, however, is an individual problem for each producer to solve.

Mr. Roeser mentioned the "above ground" waste or waste of high gasoline content natural gas which should be going to some gasoline plant in the district, the two Humble Oil & Refining Co. plants being the only two in the district, and that there should be several scattered throughout the district to process the natural gas, recover the gasoline therein and use residue for repressuring when needed.

Legality of the acreage plan was questioned but Mr. Moore took issue on this question stating that the operators who were practical should study the proposition and find out if it is workable, then have attorneys go into the legality of it after it is found practical for the district.

Col. J. Lewis Thompson, president of the East Texas Home and Land Owners Association, was asked his views and he readily stated that he thought it more equitable to the landowner than the order now in operation.

H. L. Hunt, large independent producer of Tyler, stated he was for the plan or an amended plan which would stop the orgy of drilling.

Freeman Burford, president of the East Texas Refining Co., which owns or holds interests in 45 miscellaneous tracts in the district, many of them small ones, said his company would perhaps be handicapped to some extent

(Continued on Page 103)

WOLTERS ANNOUNCES CUT TO 150 BBLS. PENDING NEW RULE

HOUSTON, Texas, Oct. 27.—Brig. Gen. Jacob F. Wolters announced today production in the East Texas oil field would be limited to 150 barrels daily per well, effective at 7 a. m. Thursday.

"I am authorized by the governor to say that this allowable will remain in effect pending consideration and working out of a plan whereby production will be held to a daily top allowable of 400,000 barrels per day (for the entire field) and through a unit acreage plan," said the general.

Reeser Considers California Offer

Pacific Coast Refiners and Operators Desire Him as Arbiter and Director General of Industry There

E. B. Reeser, president of the Barnsdall Corp. and of the American Petroleum Institute, is seriously considering an urgent request from the oil industry in California that he become director general and arbiter of the industry in that State. He regards the proposal to establish an arbiter for the oil business in California as a constructive move upon the part of the industry and feels success will attend such efforts if the necessary co-operation is assured.

The California Oil Producers Sales Agency is sponsoring the movement to obtain the services of Mr. Reeser. Mr. Reeser, under the proposed plan would become president of the sales agency also and Ralph B. Lloyd, president of the sales agency now, would become chairman of the board.

Statement From Agency

In announcing the plan to offer the presidency of the sales agency to Mr. Reeser, Rush Blodget, general manager of the agency, issued a statement to the effect that "the name of E. B. Reeser, now president of the American Petroleum Institute, has been and is being seriously considered. Our board of directors has been proceeding carefully due to the fact that Mr. Reeser has many important business connections and it has not been considered advisable to mention his name without his prior authorization. However, the responsibility of sponsoring this movement could not and cannot now be assumed by the Oil Producers Sales Agency without the whole hearted and cordial co-operation of all factors in the industry.

"Both the president and general manager of the agency for the last several weeks have been contacting the refiners and independent producing companies to ascertain their position in the matter and to secure in advance assurance of their support of this agency project.

Small Refiners Approve

"A number of the smaller refiners have already been interviewed and have signified their approval of the plan and the hope has been expressed in many quarters that the industry may see its way clear to make this experiment. If the plan develops as now anticipated, the man selected for the position would become a general adjuster of the difficulties now current in the industry. He would be permitted to weigh all the facts presented and hand down an opinion that would command the respect of the public concerned chiefly in the purchase of petroleum products and one that would be fair to the men in the industry and that would secure whole hearted co-operation from all factors concerned. He would be in no sense a czar but rather an arbiter or co-ordinator with all branches of the industry rallying to his support."

E. B. Reeser

Idea Is Not New

There has been a strong movement on foot to persuade Mr. Reeser to again accept the presidency of the American Petroleum Institute. He has guided the industry through three of its most trying years and yet, despite all the controversies which have arisen and the differences of opinion that have existed, he has maintained the respect and friendship of everyone in the industry. It is a record of which he can well be proud and it is because of this record leaders in the oil business desire to see him re-elected at the meeting of the institute in Chicago next month. It is also because of this record and his intimate knowledge of conditions in California where the Barnsdall Corp. has large interests, that California oil men want him to accept the position as arbiter there.

Should the proposed plan in California be carried out and be successful, it is felt the plan then might be adopted for the remainder of the United States. Such a plan for the entire industry has been proposed a number of times during the past four years and has been discussed at the various annual meetings of the institute. It probably will be discussed again next month at the annual meeting in Chicago. In this connection, however, there is absolutely no basis for the report such a position has been offered to Vice President Curtis. There is a strong feeling among oil men against considering any politician in connection with such a position.

Leaders in Agreement on Fundamentals

Remarkable Accord Is Apparent on Basic Principles Affecting Stabilization of the Petroleum Industry

By Earl Oliver

Upon completion of the stabilization articles appearing in The Oil and Gas Journal from July 23 to August 27, inclusive, in which were set forth certain principles* that are deemed essential to a successful stabilization effort, the managing editor requested a further analysis showing the influences that retard the general adoption of such principles. In the attempt to secure an answer to that question conferences were arranged with a large number of individuals who are believed to represent a cross section of well-informed opinion on the subject. A partial list is as follows:

James V. Allred, attorney general of Texas.

C. B. Ames, attorney for The Texas Corporation.

William J. Armstrong, chief conservation agent, oil and gas department, Oklahoma Corporation Commission.

Charles L. Black, attorney at law, Austin, Tex.

W. E. Borah, United States senator from Idaho.

W. R. Boyd, Jr., executive vice president, American Petroleum Institute.

John T. Barnett, former attorney general of Colorado.

Warner Clark, assistant general manager, production department, Standard Oil Co. of California.

J. C. Denton, chairman mineral section, American Bar Association.

R. L. Dudley, publisher, the Oil Weekly.

Northcutt Ely, executive assistant to Secretary of the Interior.

W. S. Farish, president, Humble Oil & Refining Co.

W. P. Z. German, general attorney, Skelly Oil Co.

T. P. Gore, United States senator from Oklahoma.

R. E. Hardwicke, attorney at law, Fort Worth, Tex.

R. C. Holmes, president, The Texas Corporation.

Chester I. Long, former president, American Bar Association.

T. F. Lydon, vice president, Shell Oil Corp.

E. W. Marland, E. W. Marland, Inc.

D. J. Moran, president, Continental Oil Co.

Cicero I. Murray, chairman Oil States Advisory Committee.

Peter Q. Nyce, secretary, mineral section, American Bar Association.

R. Ogarrio, vice president, The Texas Corporation.

R. D. Parker, chief supervisor, oil and gas division, Texas Railroad Commission.

R. R. Penn, chairman division of production, American Petroleum Institute.

E. B. Reeser, president, American Petroleum Institute and the Barnsdall Corp.

E. S. Rochester, secretary, Federal Oil Conservation Board.

H. H. Rogers, president, Exchange National Bank of Tulsa.

Andrew M. Rowley, managing editor, The Oil and Gas Journal.

E. J. Sadler, vice president, Standard Oil Co. (New Jersey).

R. S. Sterling, governor of Texas.

John R. Suman, vice president, Humble Oil & Refining Co.

C. V. Terrell, chairman, Texas Railroad Commission.

Fred Upchurch, assistant attorney general of Texas.

R. G. A. Van der Woude, president, Shell Oil Corp.

J. A. Veasey, general attorney, Carter Oil Co.

Paul A. Walker, chairman, Oklahoma Corporation Commission.

Ray Lyman Wilbur, secretary of the Interior.

C. A. Young, secretary, division of production, American Petroleum Institute.

ANALYZING THE SITUATION

Believing that present conditions in the petroleum industry are due largely to a lack of understanding of the engineering and legal principles involved in the efficient production of crude oil, The Oil and Gas Journal arranged with Mr. Oliver for a series of articles analyzing these principles and pointing out ways and means by which they might be applied in the several states.

Accompanying is the first of this series of articles. As is noted in the article, Mr. Oliver held conferences with leaders in the petroleum industry, those in political life who are associated closely with conditions affecting the oil business, and others whose views were desired to round out the picture. Present plans contemplate publishing the second article of the series in the November 19 issue of The Oil and Gas Journal.

Views Substantially Alike

Each of these gentlemen discussed the subject at length as he saw it. Almost every viewpoint of the petroleum industry, government, and consuming public is represented on this list. But as the interviews progressed the dominant reaction gradually impressed upon the writer was the surprisingly large extent to which all parties hold substantially similar opinions on many major points, and on the other hand that most of the points on which there is actual conflict of opinion are of comparatively minor importance and could be adjusted or ignored without doing violence to the major principles involved.

That experience forced one to the conclusion that the delay and controversy over adoption of efficient stabilization methods arise more out of confusion and misunderstandings than they do out of actual conflicts of opinion. If this be true, then any analysis that clarifies the issues and separates the conflicting viewpoints from those on which there appears to be general agreement should be helpful in promoting co-operation. This series of articles will be directed to that end.

Perhaps a first step in such an analysis is to determine who will be affected by the adoption of any proposed program. Obviously all those who might be affected are entitled to a voice in its formulation. Since a necessary part of any effective program will be the enactment of legislation, any interested party or parties not satisfied with the proposals can block or hinder them by opposition in the legislative body. It is, therefore, important not only that the program be so formulated as to do justice to all interested parties but also that the interested parties have knowledge of that fact, so that opposition will be avoided.

Who, then, are entitled to be heard? We believe they are: Roy-

*Princples developed in The Oil and Gas Journal series of July 23 to August 27, inclusive, are:

1. That each landowner or his assigns shall be declared entitled to those proportions of the oil and gas in the common reservoir that underlie his land, and shall be protected in their enjoyment.

2. That the forces of expulsion native to the reservoir shall be declared common attributes of the reservoir, to be conserved to the common interest of its several owners, and shall not be dissipated except as they are efficiently utilized in driving oil and gas from the reservoir rock to the point of extraction. When these forces have been so utilized then both the gas and the oil should be delivered to their respective owners.

3. That the State in its function of preventing waste of natural resources may require and prescribe efficient methods of exploiting oil and gas fields.

4. That during the periods of general overproduction the State, in order to prevent waste and/or to protect the producers as per Item 1 above, may determine from time to time the maximum amount of oil and gas that may be produced within the State and to that end shall have authority to limit the production in any pool to not exceed the market demand for oil therein.

5. That authority should be delegated to a state agency to formulate rules and regulations from time to time for the application and enforcement of the above principles.

alty owners, producers, transporters, refiners, marketers, consumers, and finally, voters generally. We believe also where controversy develops each of these groups can become influential in shaping or blocking a program somewhat directly in proportion to its numerical voting strength. If that be true, then it is evident the consumers, in the event of controversy, are potentially the most powerful group. Trailing them by a long distance comes the royalty owners, then the so-called small producers, the small marketers, and the small refiners, in the order named, and finally the so-called large integrated companies. This order of influence may seem unjust to those who have capital invested, but we live under political control and progress is made by facing facts. Controversy, and not any peculiarity in Texans themselves, was responsible for the recent Texas legislative fiasco.

The relative influence is in the order named only provided controversy develops. If controversy does not develop we believe the relative influence in shaping a program is directly in proportion to the capital invested; which is the exact reverse of that previously mentioned. It therefore becomes of primary importance to the industry that, as previously stated, any program not only be fair and just to all the great groups above listed but it is of almost equal importance that the groups be acquainted with that situation. Careful planning both in formulating and educating is imperative.

In attempting to determine what kind of a program can secure united support perhaps progress can be made by first discussing certain types of proposals that would meet with opposition. Inquiry made among those familiar with the Texas legislative effort as to the underlying causes for its failure almost invariably brought the response in some form or other—"selfishness," or "greed,"—and that response came regardless of the side of the controversy on which the party was engaged. Of all the inquiries made only one individual appeared to regard the Texas law with satisfaction. Inherently selfish proposals, therefore, have no place in such a program.

For the Common Good

Self-preservation is the first law of nature and each individual's initial reaction is to question the effect of any proposed policy on his own welfare. But organized society is founded on the theory that the welfare of the individual and that of society en masse are not in conflict and that both are best served when the interests of each are protected. Most men are sympathetic toward that principle and will conform to it when the issues are clear. Furthermore, there is in the average individual a sense of fair play that responds when he knows the facts.

There are, of course, in every society men who believe their interests are best served by securing unfair advantages over their fellow men; but those who maintain this as a deliberately fixed policy are in the minority and organized society's chief function and constant struggle is to develop means to curb their antisocial inclinations. As a last resort it provides institutions for that purpose. When large groups insist upon methods based on that spirit their attitude arises out of misunderstanding of the issues involved rather than any deliberate attempt to prey upon their fellow men. Mankind has long since learned that its best interest is served through co-operation. It developed government as a means to that end. Someone has well said: "Unless we learn to co-operate, the price of our prejudice and our greed will be the ruin of us all."

Tariff and Embargo

Again, each proposal must be relegated to its proper place and time in the program. If it assumes undue importance or comes out of its regular order it is almost as harmful as if it were really unsound. To illustrate: Tariffs and embargoes might be helpful factors in bringing stability into the petroleum industry; yet any program that comprehends nothing more than tariff enactment, and thereby becomes in appearance merely an attempt to unload the penalties of inefficient development on the consuming public, will meet such opposition that any attempt to enact it is foredoomed to failure. A distinguished United States senator whose willingness to help the oil industry cannot be doubted remarked in that connection: "It is difficult to help those who will not help themselves." Unfortunately the tariff and embargo efforts, well intentioned as they are, have served to delay rather than correct the industry's ills, for they have diverted attention from the real issues and raised false hopes where little chance of success was to be expected. Another proposal in equal danger of miscarriage is that of attempting to correct the industry's ills through modification of antitrust laws. The recent Texas legislative fiasco is likely to be duplicated in any legislative body where that issue is raised.

These comments regarding tariff and antitrust law modification are not made with any lack of appreciation of their possible helpfulness if they could be enacted; but this discussion is directed not at what might be desirable but rather what can be secured in sufficient time to help the industry. It does little practical good to cry for the moon when something more appropriate is at hand for the trying. Neither of these proposals can be secured except through legislation, which in turn is impossible without public approval—and that depends upon public confidence. No lawmaker would be so foolish as to sponsor them without public support. Both these remedies applied to other industries have long been the subject of public controversy and suspicion, whether justly or not is beside the question. They are popularly supposed to be peculiarly susceptible to abuse.

Need of Public Confidence

No one willingly places weapons of that character in the hands of anyone in whom there is not complete confidence; and, unfortunately, public confidence is a product the oil industry has not taken time to cultivate. The steel industry developed public confidence through the personality of Judge Gary. Henry Ford gave to the automobile industry a like place in public esteem. Without doubt the oil industry has among its leaders many men of equally high personal standards, but the legalized piracy initiated by the Pennsylvania judge in 1875 has fastened practices and methods upon the industry that have given to it, in public estimation at least, standards and ethics all its own—and some of its leaders have, unfortunately, strengthened that conviction. No industry can promote strong leadership when the underlying principles on which it must be operated are unsound—and that explains perhaps more than any other one thing why the many men of unquestioned integrity and high standards who have risen to places of leadership in their own companies have not been able to unite the industry and give to it a character that would breed public confidence.

If the experience of the majority of those consulted can be relied upon, both tariff and antitrust law modifications should come, if at all, only as incidental parts of a major program in which they play a minor role, and should not come alone or in advance as though they are the program itself.

Base Proposal on Principle

Another precaution to be considered is that each proposal should be based on principle, not expediency. That which may be expedient today might be unsound tomorrow. The Pennsylvania judge took the easiest way in 1875 and fastened upon the industry a practice that has cursed it ever since and now, sixty years later, threatens to ruin it. Again, it should be general, not too detailed. The Oklahoma conservation law of 1915 is excellent in principle but its purpose is almost defeated because its framers wrote into the law specific instructions as to the manner of determining potential production and thus promoted needless duplication of wells and unfair taking, assuming acreage content is an equitable standard. No human being can see all eventualities, and mistakes are thus perpetuated by detail directions.

A precaution that should receive more than passing notice is the importance of avoiding indirect methods. If confidence and unity of action are to be developed among the vast multitudes who will have a voice in shaping the oil industry's future, it is important that there be no uncertainty as to the meaning of each move, and what is its objective. Indirect action breeds not only confusion, but suspicion, which must be avoided where great masses are to be convinced. To illustrate: If absence of reasonable profit is an evil, that fact should be frankly stated, and its correction made an open objective instead of remedying it through the guise of preventing waste. If oil is to be conserved, it should not be attempted through

(Continued on Page 100)

Co-operative Committee Adopts Test

Apparatus and Tentative Testing Practice Developed by Bureau of Standards for Knock Rating Receives Approval

An engine has been developed to meet the requirements of fuel testing as practiced by the leading refineries of this country. The splendid co-operation by the members of the joint committee of the society, the American Petroleum Institute and the Bureau of Standards has made this possible. The original recommendations of this group, when summarized, called for an engine design to meet each of the following three qualifications:

1. The engine should

(a) Be a universal type permitting conversion from an L-head to a variable-compression overhead-valve engine.

(b) Be suitable for throttle, spark,

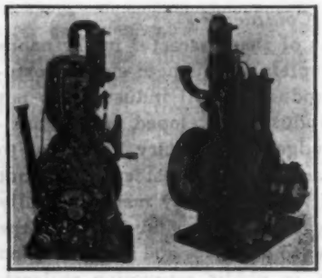


Figure 1—Two views of the original co-operative fuel research committee engine. The engine shown at the left is equipped with a valve-rocker arm linkage that automatically maintains a uniform tappet clearance as the cylinder is raised or lowered to vary the compression ratio. The view at the right shows the same engine converted to a fixed compression L-head unit by merely substituting another cylinder assembly.

bouncing-pin, listening-post or variable-compression method of testing.

(c) Operate with uniform jacket-temperature.

(d) Have convenient outlets for thermometers, accessory drives and the like.

2. The engine should be unusually rugged and adapted to withstand continuous operation under heavy detonation.

3. The design should be simple, to allow a cost that is low enough for the engine to be used generally throughout the industry.

Meeting the Desired Qualifications

Qualification 1 was met by devising a valve-rocker-arm linkage that automat-

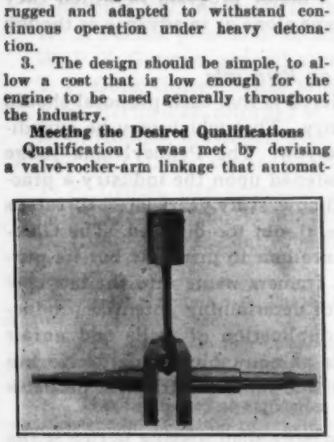


Figure 2—Crankshaft of the engine. Features of this crankshaft are its weight and the large bearings used. The dimensions of the latter are ample for a heavy-duty engine 60 per cent larger and operating at three times the speed.

ically maintains a uniform tappet-clearance as the cylinder is raised or lowered to vary the compression ratio. This arrangement permits interchangeability between a variable-compression overhead-valve cylinder and a fixed-compression L-head cylinder without disturbing any part of the crankcase or camshaft drive. The view at the left in Figure 1 shows this linkage and other special features, such as the micrometer screw for measuring cylinder height, the steam-cooling condenser, the tachometer-drive outlet, the oil-heater control-switch and the neon-tube spark-position indicator mounted on the front end of the crankshaft. The other view shows the same engine converted to a fixed-compression L-head unit by merely shifting cylinder assemblies.

Qualification 2, regarding ruggedness, was simply a question of fundamental engine-design. Figure 2 shows the heavy, counterweighted, large-bearing crankshaft. The bearing dimensions are ample for a heavy-duty engine of 60 per cent larger dimensions, operating at three times the speed. The rear bearing is made doubly long by spaced bushings to resist flywheel wabble. The cast-iron piston is of heavy section with a long, smooth skirt. It carries four compression rings and one oil-control ring. These features permit an accurate fit in the cylinder with the minimum of ring tilting. The heavy metal-section provides good heat-conduction and makes a rigid structure that prolongs the life of the

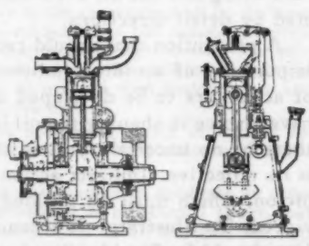


Figure 3—Longitudinal and transverse sections of the engine. The crankcase has walls 1 inch thick and its height is increased by extending the cylinder barrels below the top surface, this increased height adding to the stiffness.

TABLE 1—SPECIFICATIONS OF THE CO-OPERATIVE FUEL-RESEARCH ENGINE

Bore, in.	3¼
Stroke, in.	4½
Cylinder displacement, cu. in.	37.4
Intake-valve diameter, in.	1 3/16
Exhaust-valve diameter, in.	1 3/32
Connecting-rod bearing diameter, in.	2¼
Connecting-rod bearing length, in.	1⅝
Front main-bearing diameter, in.	2¼
Front main-bearing length, in.	2
Rear main-bearing diameter, in.	2¼
Rear main-bearing length, in.	4½
Piston-pin diameter, in.	1
Connecting-rod length, in.	10
Number of piston-rings	5
Timing-gear face-width, in.	1
Carbureter flange	S.A.E.
Carbureter-flange diameter, in.	1
Exhaust manifold pipe-tap size, in.	1¼
Spark-plug size, mm.	18
Indicator-opening diameter, in.	⅜
Indicator-opening threads per inch	18
Approximate weight, lbs.	450

parts. The piston-ring seal is, of course, vital in maintaining uniformity of pressure conditions during combustion, and the piston has been designed to furnish the best ring-operating conditions without compromise of any sort. The connecting-rod is long to reduce angularity and has a wide section to provide rigidity.

Figure 3 shows longitudinal and transverse sections of the engine. The front and rear walls of the crankcase have a metal thickness of 1 inch to provide the necessary rigidity. The box-type crankcase is made extra high by allowing the cylinder barrels to extend below the top surface. This extra height also adds to the stiffness. The main bearings are one-piece cylindrical bushings, the front one being mounted directly in the crankcase wall and the rear pair in a heavy-section carrier that permits removing the crankshaft through the rear end of the case. This type of structure was chosen because of its inherent rigidity. Dimensions of the important parts are given in Table 1.

Meeting Qualification 3, that the design be simple and the cost moderate, was made possible by the variable-valve-clearance compensating-linkage previously mentioned and by choosing a cylinder dimension of common size. The bore and stroke of 3¼ and 4½ inches, respectively, were selected because they corresponded approximately with average passenger-car engines. This permitted convenient production on ordinary equipment. The

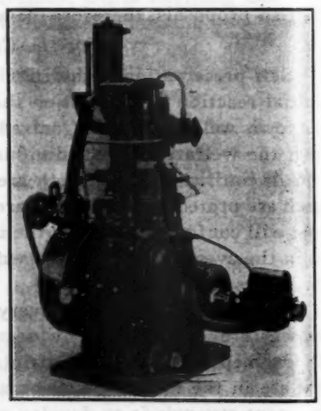


Figure 4—A modified form of engine. This unit is equipped with a modified centrifugal type of water pump and magneto ignition, the latter feature providing a uniform spark intensity.

quantity of fuel required for test with this size of engine was considered moderate, and the detonation characteristics conform more closely to actual passenger-car designs than do those of smaller or larger engines.

Modifications in Original Design

A number of engines have been built in the last two years to conform to the requirements as outlined above. These engines have been used in research work by the committee members and for routine production-control work in plants of some of the committee members and by others. During this time, refinements have been made in details, such as water jacketing, condenser-coil location, material specifications and accessibility of certain parts. Recently the committee has made recommendations for refinements in the engines based on the experience gained in this period. Fortunately, the original design was such that all changes have been conveniently incorporated into the engine without any compromise and all improvements are easily installed on the original engines. The final list of changes includes the variable-compression cylinder.

THE STATUS OF MOTOR FUEL KNOCK TESTING

The rapidly increasing importance of knock rating in motor fuels has brought numerous inquiries as to the status of knock testing methods.

It has been recognized for some time that ultimately the apparatus and method of testing would have to be standardized so that the industry would have a sound basis of comparison in determining the relative knock values of gasolines. With this end in view, the Bureau of Standards, under the direction of a Co-operative Fuel Research Committee sponsored jointly by the American Petroleum Institute and Society of Automotive Engineers, has developed what is known as the C. F. R. Knock Testing Equipment and a Tentative Recommended Practice for Conducting Anti-Knock Tests. The equipment is described in the accompanying article by H. L. Horning, president of Waukesha Motor Co. The tentative practice is also explained.

On September 14 the Co-operative Fuel Research Committee accepted the report of its Detonation Sub-Committee recommending the adoption of the C. F. R. equipment and testing practice. The approval of the equipment and procedure is based on the satisfactory results obtained by the members of the Sub-Committee during August in rating a group of eight motor fuel samples. The apparatus and method recommended was used by the Bureau of Standards in the routine rating of motor fuels and octane number ratings obtained by the Bureau on 312 fuel samples collected during March, 1931, and will be reported in Part 3 of the twenty-third Motor Gasoline Survey, soon to be issued as R. I. No. 3152 by the Bureau of Mines.

The apparatus and method have been referred to Committee D2 (petroleum committee) of the American Society for Testing Materials. The recommendations will also be considered by the Federal Specifications Board. It is not expected that either the Society or the government board will be able to take action within a year. This means that the apparatus will not be considered as standard until it is accepted by the government in its purchases of motor fuels.

At present, the "Series 30" equipment of the Ethyl Gasoline Corporation is being used in a large majority of knock tests, including purchases made by some of the government departments. This equipment was described in the March 6, 1930, issue of The Oil and Gas Journal, page 190.

the cooling system, the valve gear and the ignition system.

A water-pump of the modified-centrifugal type having a permanent seal without packing has been attached to the engine as shown in Figure 4. Nitralloy is used for the pump shaft, and the bearings are porous bronze impregnated with grease. The pump is driven at twice engine speed by a V-belt and circulates 7 gallons of water per minute at 600 r.p.m. of the engine. A lead is taken from the high-pressure point in the pump to circulate water through the manifold jacket. The condenser shown in this illustration has been altered to take in and discharge water at the bottom. The original condenser was arranged to receive steam at the top and deliver condensate at the bottom, the rise to the top of the condenser being utilized to hold back as

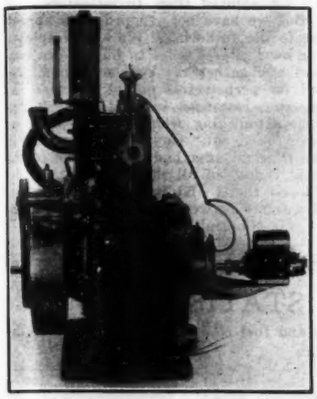


Figure 5—Modified engine equipped with fixed compression cylinder and water pump. The condenser, pump and fittings are interchangeable on both fixed and variable compression cylinders.

much of the water as possible in the cylinder jacket and allow only the steam to pass into the condenser. In high-temperature work when using mixtures of ethylene glycol, a forced circulation of the cooling fluid to prevent steam pockets has been found desirable and permits simplifying the condenser construction as shown.

Figure 4 also shows the magneto-ignition installation that has been worked out as optional equipment. The magneto has the advantage of giving a uniform spark-intensity without requiring the attention that is necessary to keep a battery in charged condition. The magneto-spark intensity over its range of advance is made fairly uniform by using an instrument

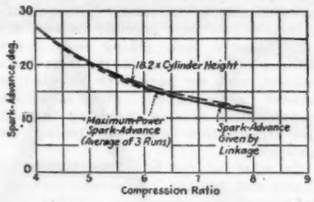


Figure 6—Spark curves for the engine. One curve is that for maximum power, being the average of three runs made by hand setting; another is directly proportional to the cylinder height and the third is the spark advance obtained by a direct linkage between the movable cylinder and the arm on the breaker box.

that is built with trailing pole-shoes for this purpose. The magneto also has the advantage of giving an accurately mounted breakershaft. Bearings on commercial battery-ignition breakershafts are not all that could be desired for fuel testing. To obtain an equivalent mounting for the shaft, building a special instrument would be necessary. The magneto is driven directly from the crankshaft through a tubular rubber-duck coupling. This eliminates any tendency to backlash and gives a high armature-speed. One spark is wasted at the end of each exhaust stroke. The magneto installation can be made on engines now in service without doing any machine work.

The engine with fixed-compression cylinder and water-pump is shown in Figure 5. The condenser, pump and fittings have been designed so that they are interchangeable on both fixed and variable-compression cylinders. They can also be installed on engines now in service without any machine work.

A study was made of the spark-advance required for maximum power at various compression-ratios. The optimum spark-advance on the variable-compression engine was found to be almost directly proportional to the combustion-chamber height. Figure 6 shows the curve for optimum spark-advance plotted against compression ratio, being the average of three runs made by hand setting. It also shows a curve directly proportional to the

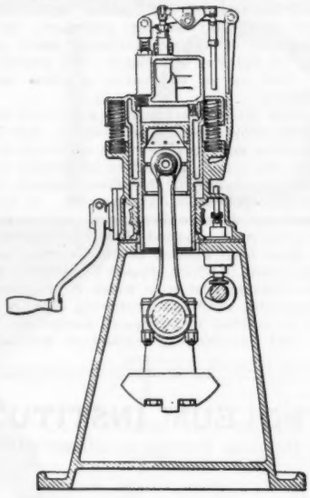


Figure 7—Diagrammatic cross section of a new variable compression cylinder. The one-piece construction eliminates gasket seal unreliability, cooling difficulties and spark plug and bouncing pin pockets, and provides a vertical bouncing pin position.

cylinder height and a third curve that is the spark-advance obtained by a direct linkage between the movable cylinder and the arm of the breaker box. A slight variation in the form of this last curve can be caused by adjusting the angularity between the breaker-box lever and the rod from the cylinder. This curve was made with the lever horizontal at 5:1 compression-ratio and 20.5-degree spark-advance. The maximum variation between the spark setting given by the linkage and the optimum spark as determined by

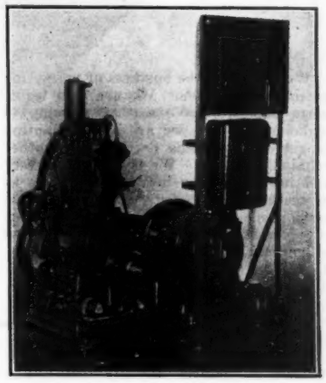


Figure 8—The engine and induction motor power absorption equipment. The engine illustrated is of the variable compression type with the one-piece cylinder construction and incorporates the various refinements of design that have been made. If desired, the fixed compression cylinder can be readily substituted.

handsetting is about one-half degree over the range from 4:1 up to 8:1 compression-ratio. Such a variation is within the limits of accuracy of the curve of results for hand setting.

The original variable-compression cylinder prompted several criticisms from various committee members. The removable cylinder-head was subject to the unreliability of a gasket seal, complicated cooling, required a tilted bouncing-pin opening and resulted in the formation of pockets of considerable size between the ends of the bouncing pin and spark-plug

(Continued on Page 83)

Recommended Practice for Conducting Tests

By Bureau of Standards

Introduction

The following practice for determining octane numbers[1] of motor fuels is suggested for the purpose of obtaining uniformity in the industry. It represents one of several methods and has been selected because, in the light of our present knowledge and experience, it is the one which is most likely to give reproducible results. The equipment mentioned has been built especially for this purpose and is recommended as being the best available for the purpose at this time. It is recognized that, as our knowledge of the art increases, changes will necessarily be made in both equipment and technique, and therefore the following practice is subject to revision. The present practice should not be applied to aviation fuels, which will be treated as a separate subject at a later date.

Apparatus

The apparatus to be used for determining octane numbers of motor fuels is composed of an engine, a method of loading, and control equipment to bring the apparatus to fixed operating conditions, together with suitable accessories to supply fuels under test to the engine and measure the resultant knock intensity.

The engine recommended is that developed especially for this purpose by the Co-operative Fuel Research Steering Committee and manufactured by the Waukesha Motor Co., of Waukesha, Wis. References to "the engine" will be understood to mean the engine with variable compression ratio and integral head which will be called "the C.F.R. Engine."

Loading and accessory equipment is furnished as a unit with the engine. This includes a cast iron base on which is mounted the engine, the power absorbing medium and the panel board. Essential control equipment, instrumentation, switches, and so forth, are suitably mounted. The carburetor was designed especially for this engine and may be ordered with either two or four float bowls as desired.

The knock measuring device is a bouncing pin coupled with either a gas evolution burette or a knockmeter, as preferred[2].

Foundation

The foundation, if possible, should be poured on a concrete floor and should have a height of at least 18 inches. Proper dimensions will be furnished with the engine. For convenience in operation, the foundation should be placed at least 2 feet from any wall. Should the floor of the building in which an engine is to be installed be other than portland cement, the floor should be cut away so that the engine foundation will rest directly on the ground. In such case the depth of foundation should be increased to give ample footing depending upon the condition of the underlying soil.

Engine Control

Start the electric motor by means of the push button switch. With the engine being turned over by the motor, turn on the ignition and set a carburetor cock so as to draw gasoline from one of the float bowls. To stop the engine, turn off the fuel and ignition switch and stop the motor by means of the push button switch.

Standard Adjustments

(a) Engine speed, 600 r.p.m.
(b) Jacket temperature, boiling water.
(c) Cooling water, distilled or rain water.
(d) Crankcase oil, S.A.E. No. 20.
(e) Valve clearances, as recommended by manufacturers.
(f) Spark advance, maximum power (automatically adjusted).
(g) Breaker point clearance, 0.018 to 0.022 inch.
(h) Spark plug, as recommended by manufacturers[2].
(i) Spark plug gap, 0.025 inch[2].

Reference Fuels

The primary reference fuels to be used are those approved by the S.A.E. Standards Committee: Iso-octane (2, 2, 4 trimethyl pentane) and normal heptane. In view of the expense and limited supply of heptane and octane, it is expected that individual laboratories will use secondary reference fuels for routine determinations[4]. Such reference fuels may be straightrun or other stable gasolines suitable for the purpose. One of these should be of low antiknock value and the other of high antiknock value, or, if sufficiently high antiknock fuel is not available, a mixture of the higher antiknock fuel plus a knock suppressor may be used. These reference fuels should be calibrated on the octane scale against heptane and octane sufficiently often to insure accuracy of calibration, and, for every case where a fuel is rated by secondary reference fuels or by means of heptane and octane, the results should be recorded as an octane number.

Knock Intensity

A tentative recommendation may be made that the knock intensity for use with the bouncing pin should be found

(Continued on Page 32)

[1] Octane number is numerically the percentage by volume of iso-octane (2, 2, 4, tri-methyl pentane) in a mixture of iso-octane and normal heptane. The octane number of a fuel is the octane number of the mixture of iso-octane and normal heptane which it matches in antiknock value.

Note.—As it appears probable that future developments may result in fuels approaching pure octane in antiknock value, or even exceeding it, pure octane would have an octane number of 100 and the scale can be extended above this point by such a secondary definition as octane numbers above 100 are defined as 100 plus the percentage of pure benzene (C_6H_6) in iso-octane-benzene mixtures. This may be considered as looking too far into the future, but any scale adopted should be capable of indefinite extension without abandoning the scale for the fuels of the present. (See S.A.E. Handbook, p. 607.)

Throughout this statement, where the word "octane" is used, the reference is to iso-octane (2, 2, 4, tri-methyl pentane).

[2] For the present the engine will include, as standard equipment, a bouncing pin and gas evolution cell. The knockmeter may be supplied on the purchaser's request, at additional cost.

[3] The question of spark plugs and spark plug gaps is being studied and the present recommendation is subject to change.

[4] At present heptane and octane may be obtained from the Ethyl Gasoline Corp., 320 Yonkers Avenue, Yonkers, N. Y., at a price of $25 per gallon each. Recently two secondary standards have become commercially available through the Standard Oil Co. of New Jersey. These fuels have octane numbers of 50 and 63 respectively, and calibration curves are furnished with them (as determined on the Ethyl Gasoline Corp. Series 30 Knock Testing engine with the bouncing pin), giving octane numbers for these fuels blended with each other and with chemically pure benzene or tetraethyl lead. For tests of motor fuels, the data were obtained with very definite operating conditions and technique at a cylinder cooling medium temperature of 212° F. These fuels are supplied at 30 cents per gallon in 50-gallon lots, or $1 per gallon in 5-gallon lots. They may be ordered through Ross H. Dickson, Standard Oil Development Co., Room 734, 26 Broadway, New York City.

Gasoline Tax Evasion Racket Exposed

Frank A. Martinek, Chairman of Illinois Committee, Tells Four-State Jobbers of Methods and Means to Combat It

By Frank V. Martinek
Standard Oil Co. (Indiana)*

We are all in the business of marketing petroleum products. We are in a legitimate business. We are all striving to make money, but we are not attempting to get it by stealing or robbing or other criminal methods. We believe in honesty and integrity in business. We believe in protecting the interests of the public we serve and the interests of the various government units under whose protection we operate. We want to see the oil industry as a whole operating under settled and sound business conditions because our prosperity as individuals depends upon such conditions in the industry.

As honest business men we have been shocked to discover recently that a dishonest and illegal practice which we have previously thought hardly more than a mild annoyance in isolated spots is an actuality so prevalent and so extensive that it is demoralizing our business, shattering the good will of our customers, and throwing the whole marketing phase of the oil industry into chaos. The practice I refer to is, of course, gasoline tax evasion.

Now we have all heard a great deal recently about gasoline tax evasion. But it has been my experience that marketers do not half realize the extent of evasion or the importance of the effect evasion is having upon their own business. It has been my duty to investigate and study evasion over a period of several months. I have been amazed at the evidence of the extent to which evasion has spread, of the thoroughness with which it has been organized, and of the menacing character of its relation to legitimate marketing.

This gasoline tax evasion or bootlegging has developed and spread itself threateningly in the body of legitimate marketing like some horrible disease. We have recently been taking some x-ray pictures of marketing in the petroleum business, and we have been startled to discover a malignant and cancerous growth of tax evasion spreading through our organization and threatening its existence.

My work so far has been largely in Illinois and Indiana. Representatives of the leading companies got together and organized a committee known as the Gasoline Tax Evasion Committee. We drew plans to bring to the attention of public officials the vital concern of the oil industry in the matter of gasoline tax evasion. Thirty-seven persons had been indicted from September, 1930, up to the date our committee was organized in August, 1931, and nothing further had been done regarding prosecution. When we appealed to them, the governor, the state's attorney, and other public officials became vitally interested because they appreciated that the State itself loses seriously when gallonage is taken by tax evaders from legitimate companies which pay the tax.

Employed Own Investigators

But we have not stopped with appealing to the authorities. We have employed our own investigators to hunt down evasion and gather the evidence which will put the perpetrators out of business and in some instances in jail. And it has been astonishing what our investigators have found out. Gasoline bootlegging in the Chicago area had become one of the most vicious of all rackets that have developed there. Kidnapping, and threats of warfare between rival gangs have had

(Continued on Page 82)

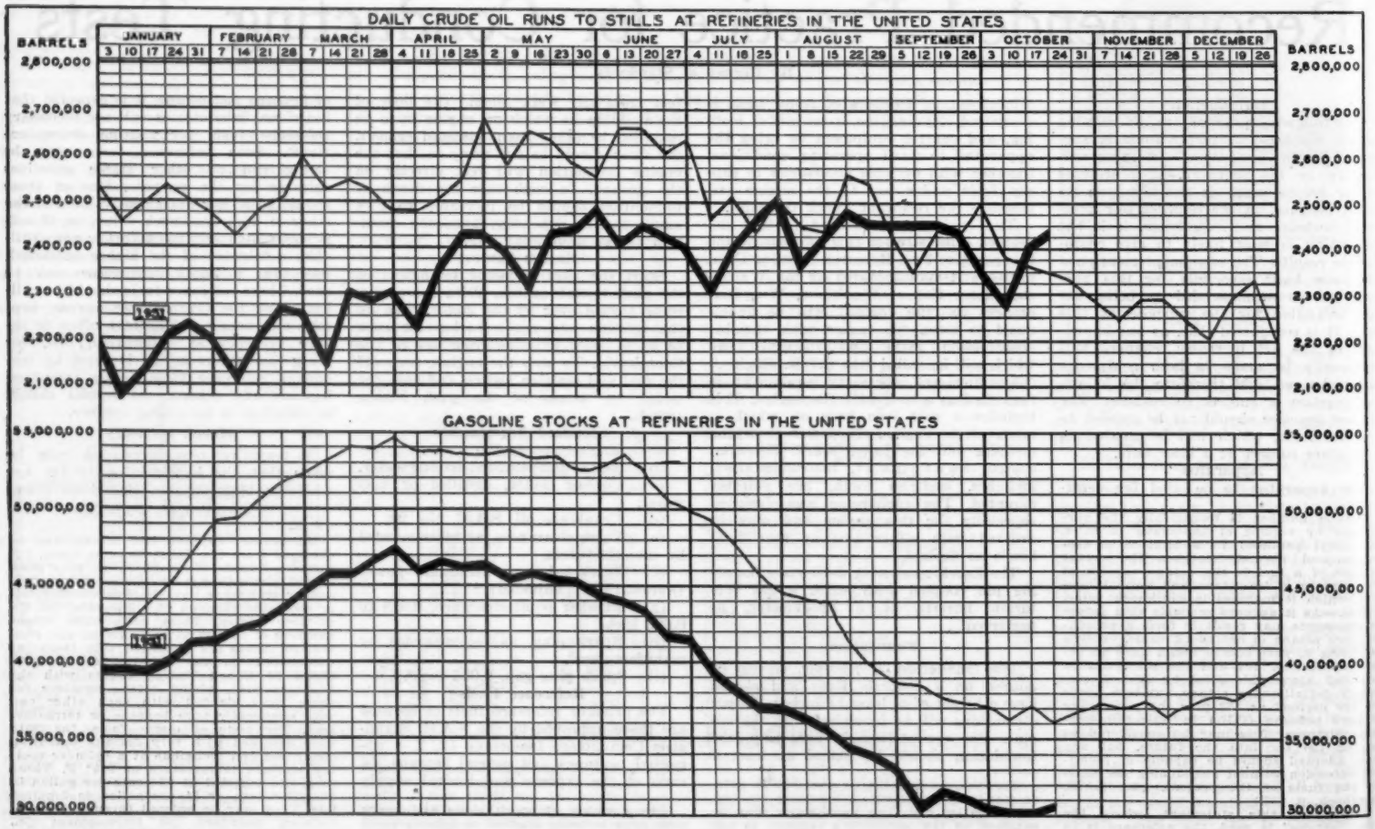
*Four-State Jobber meeting, Kansas City, October 27.

AMERICAN PETROLEUM INSTITUTE WEEKLY REFINERY STATISTICS

The weekly report made to the American Petroleum Institute on refinery statistics—crude runs to still, gasoline stocks and gas and fuel oil stocks in barrels—for the week ending October 26:

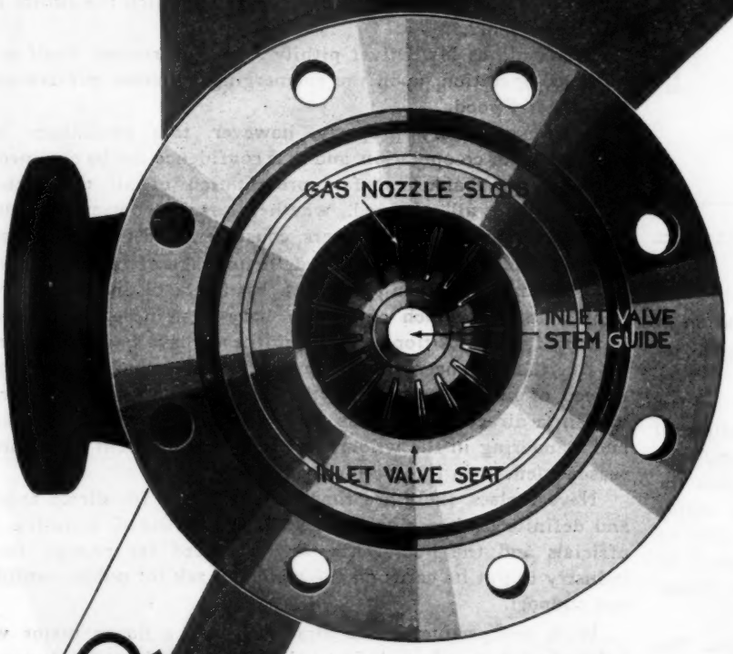
	Week ending October 24, 1931				Week ending October 17				Week ending October 25			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
East Coast	100.0	464,300	4,079,000	10,405,000	100.0	460,900	4,045,000	10,302,000	100.0	474,600	5,702,000	11,937,000
Appalachian	91.8	109,400	1,330,000	1,641,000	91.8	110,300	1,296,000	1,657,000	93 2	75,700	829,000	1,018,000
Indiana, Illinois, Kentucky	98.9	339,100	3,337,000	5,449,000	98.9	352,100	3,501,000	5,285,000	97.5	258,100	4,916,000	4,141,000
Oklahoma, Kansas, Missouri	89.6	242,900	2,868,000	5,057,000	89.6	256,700	2,755,000	5,041,000	89 4	255,300	2,434,000	4,691,000
Texas	91.3	558,700	5,634,000	11,348,000	91.3	551,300	5,451,000	11,570,000	91 9	525,000	6,196,000	10,479,000
Louisiana and Arkansas	98.9	154,100	711,000	3,742,000	98.9	172,400	696,000	3,620,000	98.3	165,900	1,010,000	2,206,000
Rocky Mountain	89.4	39,000	1,284,000	831,000	89.3	48,000	1,288,000	831,000	93.1	50,400	1,648,000	1,081,000
California	97.1	391,900	11,975,000	96,958,000	97.1	490,400	11,804,000	97,125,000	98 3	537,400	13,920,000	103,914,000
Total United States	95.2	2,390,400	31,218,000	135,431,000	95.2	2,442,100	30,836,000	135,931,000	95 6	2,342,400	36,655,000	139,467,000
Texas Gulf Coast	99.8	427,400	4,229,000	8,058,000	99.8	414,000	4,106,000	8,226,000	100.0	389,400	4,992,000	7,654,000
Louisiana Gulf Coast	100.0	107,000	554,000	2,871,000	100.0	121,000	644,000	2,693,000	100.0	107,100	772,000	1,310,000

(1) Per cent refinery capacity represented. (2) Daily crude runs to stills. (3) Gasoline stocks. (4) Gas and fuel oil stocks.



*Data for 1931 based on weekly reports of the American Petroleum Institute. Figures for last week not shown in graph but are included in above tables.

RASIGA



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Gas Engine-Gas Compressor Catalogue

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The TRANSIT 17x24" Gas Engine-Gas compressor has been put through many tests, and all the data and evidence proves a complete mixture of air and gas.

Gas and air are each piped separately from the regulating valve to each of the inlet valves, one of which is illustrated at the left. The vacuum produced on the intake stroke draws in the air over and around the gas nozzles projecting into the air stream, and the correct amount of gas as metered by the regulating valve, is drawn into the air stream through the long narrow slots of the gas nozzles in the form of thin ribbons of gas. This mixture occurs but one and three-quarter inches (1¾") ahead of the inlet valve seat.

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The Oil and Gas Journal

PRODUCING REFINING PIPELINE ENGINEERING MARKETING

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Refiners Will Install More Cracking Units To Meet Competition

* * * * * *

By W. T. Ziegenhain

MID-CONTINENT refinery executives have probably heard more about "octane number" from their sales departments in the past two months than from their technical and manufacturing departments during the three years the latter have been intensively working on the subject. Attention was crystallized when un-ethylized gasoline appeared on the market in the Midwest having an octane number between 65 and 70.

At first refiners were divided in their opinions regarding the expediency of the move. Now, however, the great majority of them are most earnestly considering installing special cracking equipment to meet the new demands. They are not going to be lulled into the belief that a move on the part of their competitors to raise the octane number of their regular gasoline from 58 to 65 is "inconsequential."

The important marketing positions held by the few, causes the others to make a quick answer to the question of adding high temperature cracking equipment.

If this is to be the accepted method of meeting competition, briefly stated, it will lead to refiners making a more volatile fuel they will need to find an outlet for substantial quantities of gas, and the kerosene output will probably decline. Ultimately such a program could lead to branding straightrun gasoline as "unsuitable." It will eventually make it more and more difficult for new, poorly equipped plants to spring up in fields of flush production and in this respect promises to help stabilize the refining industry.

How far will refiners go in raising the octane number of their gasoline in 1932? Some technologists contend we have only started, others say we are already beyond the needs of the motor manufacturer. Upon the answer to this question depends the extent to which the refining industry will add reforming units and other cracking equipment to produce average motor fuels of say 60 to 65 octane now and maybe 70 to 80 octane number within a period as short as two years. Those making the latter prediction say it is no more startling than to have said 10 years ago that the average refinery will get 48 per cent gasoline from crude oil in 1931.

There is one point of agreement in the program of raising the octane number of gasolines, however, and that is, the practice must be economically correct. It is the argument of this question that introduces so many factors. It is not a question of whether a high antiknock gasoline is better than a low antiknock gasoline in 1931.

* * * *

Economically Correct

Summarizing the statement of one exponent of "go higher" he said: "The program of raising the compression ratio of automobile engines is economically sound and there are too many influential factors working toward that end to stop it at this early stage."

The mechanical advantages of a high compression motor has been recognized for a long time and the discouraging factors that arose thus far in adopting them to the pleasure car have not seemed unsurmountable. One of the most serious troubles has been the accumulation of carbon in the cylinder head. While this occurs in the low compression motor as well as in the high compression head, its presence is not of great concern in the former because the space is relatively large. A few ounces of carbon in a small head space causes a serious rise in the pressure. The solution of this problem has been suggested in the use of a new solvent which, when injected into the cylinder of the motor loosens the carbon from the walls and the carbon is blown out through the exhaust upon starting the motor. This practice was tried on certain high compression motors installed in Chrysler cars two years ago and automotive engineers now expect a more general application made of the principle. It has been indicated that several companies will exhibit new cars during the next annual show January 1 which have a compression ratio of better than 6:1 and which will carry a carbon remover injector as standard equipment. To remove the carbon all the driver needs to do is to press a plunger which forces the volatile liquid solvent into the head of the motor. This is done while the motor is idle and at night, so that by morning the carbon is loose and may be blown out when starting.

Car of Future

If the average car of the future is to have a 6:1 compression ratio, an improved gasoline will have to be made but, many refiners contend the gain in the automotive efficiency of the motor is not equal to the increased cost of manufacturing the gasoline. The answer to this statement naturally comes in the form of "find means of reducing that cost."

While it is true that a diminishing gain is registered in the economy of operating a car as the compression ratio is raised, motor manufacturers lead us to believe we have not yet reached anything like the "highest useful compression ratio" and remain a long way from even the "highest economical compression ratio." It is no secret that several motor manufacturers have distributed fleets of cars for test purposes in which were motors having a 7:1 and 8:1 compression ratio. This relationship is shown to some extent in Figure 1 which was included in a discussion of the subject by Earl Bartholomew and Franklin Fricker of the Ethyl Gasoline Corp., in The Oil and Gas Journal, March 26, 1931, page 38.

It must be remembered, too, that economy of operation is a secondary factor to most people buying cars. We are more

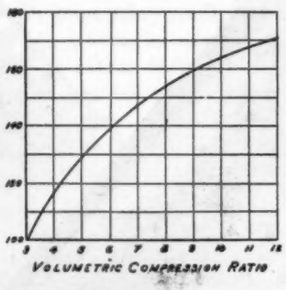

Figure 1—Graph showing the relation between compression ratio and the percentage of economy and power delivered.

mindful of that factor at present because of the depression but as we return to normalcy, car buyers will renew their interest in such factors as smoothness of operation, speed, acceleration and certainly will not tolerate a "knock" if they can buy a gasoline that does not knock. The new car owner is introduced to these "satisfactory" gasolines when he drives the new car from the show room because the car salesman sees to that. This has been an important factor in the sale of high antiknock gasolines in the past and 1932 and 1933 are expected to become banner years in the sale of new cars, due to the lean years of 1930 and 1931. A survey recently showed of the 26,700,000 passenger cars and trucks registered in the United States, 13,000,000 will have been in service five years or more by the end of 1931. Furthermore, only 2,900,000 new cars were purchased in the United States during 1930 compared with an average of 3,672,500 for the past six years.

To some executives the presentation of such facts has been termed "sales arguments" and "propaganda" but as gallonage is taken by those competitors who are now able to supply the gasolines of higher octane rating, they see the need to meet this competition in one form or another.

Then, too, there has come the quieting information to the effect that certain important competitors will not raise the antiknock rating of their gasoline until late next year, if done at all. Also, that raising the octane number of the regular grade from 58 to 65 is "inconsequential." If this were true, the companies now manufacturing the higher antiknock material would not have spent the money to add reforming units, add to their gas recovery plants and erect larger and more efficient stabilizers. To be specific, examples may be made of the new installations at the Standard Oil Co. of Ohio in Cleveland, the Magnolia Petroleum Co. at Beaumont, Standard Oil Co. of Indiana at Chicago, Standard Oil Co. of Louisiana at Baton Rouge, Empire Oil & Refining Co. at Chicago and others. Recently the Standard Oil Co. of Kansas, the Midwest Refining Co., subsidiaries of the Standard Oil Co. of Indiana, and the Solar Refining Co., a subsidiary of the Standard Oil Co. of Ohio, announced revisions would be made in their cracking equipment for the purpose of "bringing it up to date."

Then, too, these refiners are not of a nature to be steam-rollered into adopting costly means of processing simply because the equipment is a new development. Instead, they must first be convinced the revision is consistent with business trends. The new equipment must justify itself on the basis of increased revenue or at least in the improvement of quality of the finished product.

Operating Factors

In balancing the average modern refinery for the manufacture of motor fuels of high octane number, the change involves adding a large and efficient gas recovery and stabilizer unit in addition to the cracking plant. In most cases there will be no appreciable increase in the total volume of gasoline manufactured. A recent proposal to install a reforming unit in a Mid-Continent refinery showed the total yield of gasoline from crude would only be raised from 64.5 to 65 per cent. The composite of the gasoline production at this plant at present has an octane number of 50 and by balancing the plant to utilize the reforming unit the output is expected to be 70.

Thus the cost of carrying the investment and the cost of operation must be justified by the improvement in quality, principally. Other vital operating consideration includes making additional quantities of gas to be economically used or sold. It will also mean that a fully balanced plant will not need to ship in very much natural gasoline, if any.

Use of Natural Gasoline

As a result of adding cracking equipment to make gasolines of high antiknock value, refiners are making a low endpoint straightrun product direct off the crude and also a low endpoint cracked gasoline. The straightrun gasoline will usually be below 380 endpoint and the composite will probably average between 400 and 410 endpoint. There will be enough low endpoint gasoline made off the stabilizer and having an octane number of 85 to 90 to bring up the volatility of the refinery production that the use of ordinary A or AA natural will be comparatively small.

A similar prediction was often heard when refiners were first considering the installation of pressure cracking units but instead of these refiners cutting down their purchases it was found later necessary to greatly increase them.

The change was caused by the fuller appreciation of need for "balanced volatility" in the motor fuel.

In the meantime the trend toward greater volatility of motor fuels has been constant but it must be remembered that during the time pressure cracking plants were being installed, there was a substantial increase in the yield of gasoline per barrel of crude processed. In many cases the result was that 2 gallons of gasoline had to be brought up to the required volatility to the 1 gallon of straightrun before.

After installing reforming units, there will not be anything like this increase in the total gasoline output and the reformed gasoline which is made, will have to be well stabilized and will yield excess light fractions to be used to blend with the straightrun. Naturally, however, this change will come slowly and other factors may be introduced in the meantime.

Price Consideration

The recently adopted program of quoting prices on the octane number of gasoline introduces a new factor favorable to the installation of reforming units or vapor phase units. For the present at least gasolines below 55 octane number are quoted one-eighth to one-quarter cent below those in the range of 55 to 65 octane number. As a matter of fact, however, it costs more to produce the average gasoline of 55 octane number than one from the same crude of 60 to 65 octane number. This is applicable in most cases because the 55 octane gasoline is a straightrun product and costs more than a cracked gasoline of 65 octane number.

This decline in cost is not true as the higher octanes are sought, however,

(Continued on Page 101)

Hardboiled buyers don't scare a real salesman if he has the real goods

The products of Dubbs cracking are the real goods Dubbs cracked gasoline brings a premium; Dubbs cracked fuel oil will bring a premium, too, when buyers learn how good it is

Dubbs cracked fuel oil is better than the original charging stock—it has more B.T.U. per gallon—lower viscosity—lower cold test It can be made to uniform specifications

It is a manufactured fuel oil—not a hit or miss by-product

Cracked gases can be sold profitably, too They are much too valuable to be burned in the plant

Good products and good selling spell profits

Universal Oil Products Co
Chicago Illinois

Dubbs Cracking Process
Owner and Licensor

Market for 545,000 Barrels in Oklahoma

Corporation Commission Is Told That Much Oil Will Fill Refiners' Daily Requirements. Purchasers Testify Personally

By Special Correspondent

OKLAHOMA CITY, Okla., Oct. 27.—The Oklahoma Corporation Commission heard the petition of the State proration committee and fact finding committee on the question of establishing production figures for the months of November and December in line with the demand for crude oil from Oklahoma fields. The hearing began on Monday afternoon and continued through today. The principal feature of the first day was the testimony of representatives of the purchasing companies on the quantity of crude oil they wished to take in the two months.

At today's session Chairman Walker of the Commission surprised the oil men with the announcement of a ruling by the commission that it did not consider oil not produced during the military shut down of the Oklahoma fields as underproduced oil. The oil men had taken it for granted that the allowable production scheduled for the period in which the shut down was in effect could be made up after the shut down order was lifted. Mr. Walker made it known that martial law had the effect of balancing the books as of August 4 so far as underproduction was concerned, leaving the situation unchanged during the shut down. This affects 2,000,000 bbls of the 5,805,000 bbls. underproduced up to September 1.

Col. Cicero I. Murray, who represents Governor Murray as head director of the present conservation program, made several recommendations as to the manner of operating wells. One would pinch production so wells might flow continuously; another was a new plan of determining potentials, another for distribution of allowable production and a fourth to make purchasers determine that the oil they buy is legally produced.

Wirt Franklin, Oklahoma City independent operator, prepared today to file a petition demanding 78 Oklahoma City field wells be plugged back to save the field from salt water encroachment. Hearing on Franklin's petition will be held Thursday.

Lieut. Col. Cicero I. Murray has also advocated a new method of handling proration in the field, based on continuous production through a choke at a set percentage instead of the present method of flowing wells wide open for a short period and then closing them tightly. The new method, Colonel Murray said, would lengthen the life of the wells.

Franklin's petition, he said, would be based on the application he filed five months ago to divide the field into four producing zones.

Forty-four witnesses were called by the Corporation Commission to testify to the crude oil requirements from Oklahoma for the months of November and December. Most of the witnesses were representatives of crude oil purchasing companies. It has been estimated that 545,000 bbls. of oil per day would fill the needs of the purchasers during the two months. Of this amount, it was figured that 180,000 bbls. should come from the Oklahoma City Field; 155,000 bbls. a day from the Greater Seminole area; 19,000 bbls. per day from Tatums and West Chandler and 191,000 bbls. from all the other fields in the State. A meeting of the oil buyers was held in Tulsa late last week and the above schedule was satisfactory to them.

When the Corporation Commission meeting opened Monday afternoon, E. R. Hughes, a member of the commission, made a statement in the form of a question in which he expressed doubt as to the commission's right to hear evidence on allowables while military rule is in force in the oil fields of the State. He said the powers of the commission had been superseded by the governor.

Vast Underproduction

Attorney John Miley represented the petitioners for a new Corporation Commission order. Mr. Miley presented a mass of evidence from the Oklahoma City Field umpire's office through Frank Cousins.

Cousin's report showed that on September 1 total underproduction of the field was 5,805,696 bbls., while the overproduction totaled only 192,245 bbls. This compared with an underproduction of 761,170 bbls. and an overproduction of 479,200 bbls. on July 1.

Wirt Franklin and B. G. Patton objected to presentation of evidence affecting the over or under amounts since August 5 when martial law was invoked in the field. No evidence was presented tending to show what disposition will be made of the huge underproduction, most of which was by voluntary action of the operators in a "sympathetic strike" to bring about a higher price for crude.

Ray Collins, state umpire, gave the following figures on potentials and allowables as he had figured them for the month of November, by pools:

Pools—	Potential	Allowable
Class A	45,249	49,786
Others	161,275	151,000
Class B	365,516	155,000
Class C	185,641	18,700

Collins recommended a 10-day potential gauge on wells in the Greater Seminole or Class B, and he estimated the tests would show about 310,000 bbls. daily for the field. He has also granted a higher allowable to the west Chandler Field in Lincoln County, bringing the total outlet to 3,900 bbls. daily, since The Texas Company has increased its runs from 800 to 2,000 bbls. a day.

Nominations of Buyers

Representatives of the oil purchasing companies were called upon to state their crude oil nominations for the balance of the year. The Empire Pipe Line Co. nominated 35,000 bbls. a day from Oklahoma City. It has been running 22,000 bbls. a day this month. The Continental Oil Co. asked for 18,500 bbls. a day from Oklahoma City and 7,500 bbls. a day from other fields. Stanolind Crude Oil Purchasing Co. nominated 45,000 bbls. a day from Oklahoma City and 10,000 bbls. a day from other fields in the State. Shell Petroleum Corp. asked for 12,000 bbls. from Oklahoma City, 12,000 bbls. from Greater Seminole and 16,600 bbls. from other fields, a total of 40,600 bbls. per day.

The Texas Pipe Line Co. was satisfied with its present takings of 5,000 bbls. a day from the Oklahoma City Field for The Texas Company and 10,000 bbls. which it is taking from the field for other companies. It also nominated 15,000 bbls. a day from Seminole and 9,000 bbls. from scattered fields. General Superintendent John K. McGoldrick of the Texas Pipe Line Co. of Oklahoma said the Indian Refining Co. wants 7,000 bbls. daily from Oklahoma City and 2,000 bbls. from other sources. Eason Oil Co. of Enid bid for 3,000 bbls. a day from Oklahoma City and 2,000 bbls. from other fields. Deep Rock Oil & Refining Co. nominated 10,000 bbls. a day, most of it from the Greater Seminole pools. Crude Oil Transportation Co. asked for 15,000 bbls. a day for the Gulf State Refining Co., which has a 3,000-bbl. plant at Oklahoma City which has been shut

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Late Fields

KANSAS

Arkman and Baker and others' No. 1 Povenmier, SW cor. NW Section 14-22-13, a wildcat in Coffey County, Kansas, is spudding.

C. B. Davis and others' No. 1 Kelley, SW cor. NW Section 22-20-10w, a quarter of a mile east of oil production in the Schurr Pool, in Rice County, is to be drilled deeper. The test is now producing from a total depth of 2,593 feet and is making 2,000,000 feet of gas. Tools are to be moved into the location at once and the well will be drilled to the Silicious lime.

Harris & Haun's No. 1 Blair, NW cor. NE Section 28-19-1w, on the east side of the Ritz-Canton Pool, McPherson County, extended the gas area a half mile southeast. The well made 10,500,000 feet of gas a day from the chat at 2,915-17 feet. The well has been shut in at the present depth and completed.

In the Decker gas area of the Ritz-Canton Pool, in McPherson County, Stearns-Streeter and others' No. 2 Chindberg, C NW NW Section 13-19-2w, is being plugged back after finding water in the bottom of the chat formation. The chat was found from 2,932-95 feet, where it made 7,300,000 feet of gas a day. The water was found at 2,988 feet and the well will be plugged back to 2,985 feet.

Rig is up for Vernon Oil & Gas Co.'s No. 1 Thomas, NE cor. SW Section 26-19-2w, on the west side of the Ritz-Canton area.

The wildcat test in the southeastern part of Barton County was preparing to drill deeper. The test is Hilligoss and others' No. 1 Isern, NW cor. SE NE Section 12-20-11w, where a hole full of oil was found in the Silicious lime at 3,313-14 feet. Tankage was being erected and the operators plan to lay a 2-inch pipe line to a loading tank which will be built on the Santa Fe railroad 1 mile south of the well. The operators have landed the casing on top of the oil showing and were preparing to start drilling.

The week ending October 24 indicated that field operations were on the increase in Kansas. Sixteen new operations were reported. The new work was started by several different oil companies in a half dozen counties. The new operations were in Ellsworth, Rice, Morris, Cowley, Coffey and McPherson Counties.

OKLAHOMA

The Oklahoma Corporation Commission announced Monday that it had decided to reopen hearings on the Wirt Franklin petition to classify production in the Oklahoma City Field by sand zones and the Indian Territory Illuminating Oil Co.'s petition to drain the lime areas and set the time of the hearings for October 29. Both petitions affect the Oklahoma City Field only. Petitioners to request the hearing include Phillips Petroleum Co., Skelly Oil Co., British American Oil Co., and the Chatham Oil Co.

Attorneys for the petitioners stated that they had additional information which would show that the North and South Wilcox sand pools, or sand zones,

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BALTIMORE PROPOSES TAX

BALTIMORE, Md., Oct. 27.—An ordinance has been introduced for adoption by the city council requiring oil companies to pay a tax of one-half cent per gallon on all gasoline and other motor fuels sold in the city and an annual tax per station of $100.

High Spots in Field News

ROCKY MOUNTAIN AREA

Morgan County, Colorado, test closely watched. Prairie operation most important wildcat drilling there.

CALIFORNIA

California crude market strengthening. Production still above mark but expected to decline by end of year.

KANSAS

Wildcat producer on Ellsworth arch in southeastern part of Barton County. New potentials in Ritz-Canton.

SOUTHWEST TEXAS

New pool southwest of Darst Creek looks more favorable following drill stem tests. Renewed field activity in Southwest.

OKLAHOMA

Production in Pontotoc County extended half mile by new shallow sand well. Oil stocks being reduced by continued withdrawals.

GULF COAST

Iowa Dome producer opens seventh new field on Gulf Coast this year. Manvel discovery well in Brazoria County to be deepened.

NORTH LOUISIANA-ARKANSAS

New producing spot in Sabine Parish. Test in Clarke County, Mississippi, ready for test. Likely looking sand in Union County, Arkansas.

WEST TEXAS

Southern Ward County test increases to 2,500,000 feet of gas when drilled deeper. Drilling activity in Wichita Falls district increases.

EAST TEXAS

There were 128 new locations during week and 115 completions. There are now 977 wells drilling and 2,617 completed. Dry hole in western Gregg County.

To Force Showdown on Colombia Law

American Companies Plan Test Case to Clarify Sub-Soil Rights Question. Continued Political Maneuvering May Result in Oil Company Withdrawals

By A. E. Mockler
New York Bureau, The Oil and Gas Journal

NEW YORK, Oct. 26.—American oil companies with extensive investments in Colombia upon which, thus far, they have been unable to capitalize due to the vagaries of the oil laws of that country, are determined to force an early showdown on the entire question of land rights and other questions which have long been in dispute, it is learned here.

Reports from Bogota a few weeks ago indicated that the early liberalization of Colombia's oil laws was in sight, Dr. Anibal Cardoso Gaitan, former chief of the legal department of the Colombian Bureau of Mines and Petroleum of the Ministry of Industries, introducing in the Colombian senate a bill amending Oil Law 37 so that many of the more objectionable features of Law 37 would be modified to meet, in part at least, the objections of foreign oil companies owning properties in Colombia.

The Cardoso amendment was followed by a measure introduced in the Colombian House, proposing in turn the amendment of the Cardoso proposals for the further liberalization of the country's oil laws. The house bill, introduced by Eduardo Lopez Pumarego, went still further than the Cardoso plan for modification, and provided, among other things, for the following revisions of Law 37:

Proposed Revision

1. Increased the storage charge to be paid the operator by the government for storage of government royalty oil from 1 centavo to 2 centavos per barrel per month.

2. Provided that the soil owner receive the first preference as a proponent for a government contract for drilling for oil in cases where ownership of the subsoil cannot be proven. (Titles to Colombian land antedating 1873 carry ownership of the subsoil, while later titles do not.)

3. Limiting total acreage allowable to a government contractor to 100,000 hectares. This would tend to limit the "denouncing" of competitors' lands by operators.

4. Favorably modifying the minimum limit to which the government may restrict crude oil production.

5. Tending to eliminate some of the restrictive features of Law 37 with respect to private title, and simplifying the method of proving titles.

6. Reducing by 50 per cent the production tax on oil produced from privately owned lands.

7. Reducing the number of members of the new Government Advisory Oil Board.

8. Favorably modifying the government fixing of pipe line transportation tariffs.

9. Eliminating all royalty and production taxes on crude produced on both government and privately owned lands for domestic refining and consumption.

Enactment of the measures provided for in these two bills, American oil men declare, would go far to end the uncertainty which has existed in Colombian oil circles for the past several years, and would give American operators in that country some sound basis upon which to resume development operations.

Conditions at the time of the introduction of these measures a few weeks ago indicated that favorable action might be looked for, and there was considerable activity in the South American departments of the companies affected, an early resumption of operations being anticipated.

Later developments, however, have tended to indicate that the Colombian administration is not favorably disposed toward the liberalization of Oil Law 37 provided for in the senate and house measures, and as a result both bills now appear destined to die in committee.

Oil Political Football

The petroleum industry in Colombia has long been a political football, with interested American companies (with two exceptions) standing on the sidelines waiting for the game to end. Apparently, to judge from the present developments, Colombia's political forces have an inexhaustible supply of substitutes for the petroleum football game and the game is destined to continue.

There are six major American companies with important interests in Colombia, there being Sinclair, Gulf, The Texas Company, Standard Oil Co. of California, Union Oil Co. of California, and Standard Oil Co. (New Jersey).

Standard Oil Co. (New Jersey), through Tropical Oil Co. and the Andian National Pipe Line, is in a dominating position in Colombia at the present time. With 1,000,000 acres of oil lands, settled production and adequate transportation, all operating under two grants, the company is not affected by Colombia oil legislation, which does not apply to these grants.

Gulf, through its control of the Barco concession, is likewise free of the restrictions of the general Colombian oil laws, although rather narrowly proscribed in its operations by the terms of settlement in the recent compromise agreement which validated the Barco concession. While Gulf is technically "in the clear," however, there still remains the adjudication of suits brought by the Barco heirs, and until these matters are cleared up Gulf will not be in position to proceed with development work on a broad scale. At the present time, Gulf is still maintaining but a skeleton force in Colombia, and is merely carrying out the routine requirements of its grant, pending final settlement of litigation.

The other American companies with holdings in Colombia, however, are not protected by the special provisions of these grants, and are amenable to the general petroleum laws of the country, which are as yet considerably involved.

American Investments

Investments by American oil companies in Colombia are conservatively estimated at more than $130,000,000, and with the exception of those of Tropical Oil and Andian, this heavy investment is representing unproductive capital, with carrying charges swelling the totals on the wrong side of the ledgers of the companies involved.

The companies affected have thus far been content to "mark time" pending further developments in the progress of oil legislation in Colombia, but present indications are that the period of marking time is about at an end and that early efforts will be made to sufficiently clarify the atmosphere to make possible one of two decisions—the continuing of development and exploitation work under

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Colombia Oil Inspector Makes Report

American Companies Affected by Legislative Restrictions Suspend Operations Until Uncertainty Is Removed

By Charles E. Kern
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Oct. 23.—Conditions of the oil producing industry in Colombia are outlined in the annual report of the Colombian oil inspector addressed to the congress of that country, and just received here.

The part of this report which is of principal interest relates to the activities of oil companies during the past year. The inspector states that in October, 1930, there was only one company (aside from the Tropical Oil Co.) operating on Colombian territory with drilling rigs, but that the following companies had remained in Colombia in the expectation of new petroleum legislation: Texas Petroleum Co., Mid-Colombia Oil & Development Co., South American Gulf Oil Co., Colombian Petroleum Co., Compania Colombiana de Petroleos, Richmond Petroleum Co. of Colombia and Societe Europeene des Petroles.

The activities of the Texas Petroleum Co. are given special attention in this report which shows that this company has done a vast amount of geological work on public and private lands and has constructed houses, opened roads or paths, highways, etc., which activity was suspended after an inspection by James Terry Duce, the manager of the company from New York.

Mr. Duce, the report says, "suspended all the activities after studying the situation created by the new oil law," and the report adds this action was confirmed by the board of directors of the company in New York.

American Company's Protest

Following that action the personnel of the different commissions of geologists were discharged or transferred to other countries. The report quotes a letter received by the inspector from Samuel Haskell, manager of the Texas Petroleum Co., in Bogota who confirmed the withdrawal of geologists and said the company had continued with its work after the new oil law was enacted as it was supposed the law would be practicable and would permit the immediate investment of capital and application of effort in the development of privately owned petroleum lands, adding:

"Things not having turned out as announced, the company considers that there is no basis for commercial operations in which rights of private owners and company capital could count on the necessary safeguards in spite of the very respectable contrary opinions of both native and foreign personages whom the new law does not affect nor prejudice in any way.

"From this it follows that the immediate grounds for the withdrawal of the Texas Petroleum Co.'s activities from Colombia are certain restrictive and burdensome provisions of the new petroleum law. And at this point we wish to make it clear, in order to avoid erroneous interpretations and assertions, that although the petroleum industry in general is at present passing through a period of great depression, in which all producers have been forced to restrict their operations and reduce their investments, that situation was not singly the decisive one in the withdrawal of the operations of the Texas Petroleum Co., which had a very different intention, but rather the conditions of the law, which if they are bad even for periods of prosperity in the industry, must be worse in an epoch like the present one. And the law is far from meeting actual conditions."

Many Objections

"Many are the objections that can be formulated to Law 37 of 1931," said Mr. Haskell, who then cites some of the more important hindrances of which he complained. Among them were requirements as to free delivery of private data of every kind, onerous conditions as to storage, special legislation in regard to titles of private ownership of oil lands and as regards procedure for making them effective, the latter the most important objection that the law merits.

He also complains of special suits having the practical result of inverting the legal position of the parties and ignoring rights hallowed by the civil law in favor of the owner and possessor, excessive and confiscatory taxes in kind, on production of privately owned petroleum.

Mr. Haskell further declared that contractors were obliged to begin production within a determined period although the government may not have given its approval to the respective pipe line requirement to produce not less than one-fourth of the maximum productive capacity of the wells, to submit the fixing of that capacity as well as other matters, to obligatory and unappealable arbitration, to return or deliver free to the nation the means of production and transportation, to pay high royalties at the port of embarkation, collectible at the wells, in kind or in money or either, which is also true of taxes; to submit to numerous and excessive penalties.

Mr. Haskell declared that his company's objections were justified as shown by the fact that the features complained of were left out of other contracts the government made in the so-called Folsom-Chaux contracts.

Vast Sums Invested

The report of the inspector shows that vast sums have been invested in Colombia by oil companies.

The Mid Colombia Oil Co., subsidiary of the Transcontinental Oil Co., had made total expenditures up to August, 1930, of $2,500,000. This company withdrew from the country, selling its equipment to the Tropical Oil Co.

The expenditures of the South American Gulf Oil Co. up to August, 1931, amounted to $12,000,000 according to the Colombian "Who's Who." This is the company that acquired rights under the

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East Texas Has 977 Drilling Wells

New Locations During Week Numbered 128, With 115 Completions. Now 2,617 Wells in District. Several Wildcats Abandoned

By L. E. Bredberg

DALLAS, Tex., Oct. 26. — Locations in East Texas dropped from the peak of 190 last week to 128. Completions also declined, there being 115 reported, while last week there were 127 wells completed; however, several of the completed tests were abandoned wildcats. Gregg County had the largest number of first reports this week, 62. There were 36 locations staked in the Joiner area, Rusk County; 9 in the Kilgore area, Gregg and Rusk Counties; 11 in Smith County, and 10 in Upshur County.

Gregg County also had the greatest number of producers, 61, while there were 34 completed in the Joiner area, Rusk County, 8 in the Kilgore area, 9 in Upshur County, 1 in Smith County and 2 wildcats, one in Cherokee, a location, and one in Wood County.

The number of wells completed in the district as of 7 a. m., October 26, was 2,617, while production for the 24 hours ending 7 a. m. of the same day was 428,310 bbls., or 28,310 bbls. above the amount which the Railroad Commission set as the daily maximum from the district. This production came from 2,599 wells. Twelve wells reported no production, six not reporting their production. In 10 weeks' time, from the declaration of martial law by Governor Sterling and shutting in of production on August 17, there have been an average of approximately 100 wells per week. At the present time there are 977 drilling operations in the entire producing area.

For the week ending October 20, the field averaged 400,288 bbls., while distribution by pipe line runs, tank car shipments and runs to local refineries averaged 425,938 bbls. per day, the overage coming from farm and steel storage in the district, refineries receiving 25,314 bbls. of this amount per day, all refineries operating at but a small percentage of their daily capacity, while three were shut down. It is difficult for them to obtain crude for processing with trunk pipe lines after all the oil they can obtain. As seen by the distribution report but little oil is going out of the district by tank car, oil being shipped from only six loading racks in the district. Tank car shipments fell from 11,160 bbls. on September 23 to 3,640 bbls. on October 23, a decline of about 7,500 bbls. per day in a month's time, showing how trunk pipe line companies have been connecting to the many leases, and new leases put on production, taking practically all of the production in the district.

Dry Hole in Western Gregg

Another dry hole was completed on the western Gregg County producing edge this week, further defining the limits of production in this area. Williams and others' No. 1 Smith in the J. M. Morris Survey topped the sand at 3,737 feet or minus 3,351 feet, and drilled dry sand to 3,746 feet, failing to produce. A drill stem test was made, the hole showing but a small amount of oil, and the test was abandoned. Elevation is 386 feet.

Flannigan and Tidal Oil Co.'s No. 1 Walker in the S. L. Davis Survey, western Gregg County, near Sun Oil Co.'s No. 1 Walker, which has been making around 50 per cent water, was completed this week, making only 10 bbls. in 24 hours, but later sprung a surprise when worked over and increased to 60 bbls. per hour open through tubing and casing. This test topped the sand at 3,599 feet, or sub-sea datum of minus 3,327 feet, or below the water level. Total depth is 3,604 feet, or minus 3,332 feet. Elevation is 272 feet. With the well pinched in to 165 bbls. per day, water may be held back indefinitely, although it is in a dangerous location in regard to water encroachment.

The Sorrels and Duffey test on the Wooten farm in the I. Williams Survey, Upshur County, which created considerable excitement a few weeks ago, is now shut down at 3,698 feet in sand. Four joints of mud and salt water showed up on a drill stem test made from 3,611-98 feet, precluding production possibilities for the test.

Interesting Upshur Test

Cranfill & Reynolds are ready to spud in on their No. 1 Rash in the E. N. Eubanks Survey, southwest of Jamestown, in Upshur County, an interesting test for this area, which may extend production farther north from the Lathrop area, in a narrow neck flanked on each side by dry holes, DeArmand & Burke's No. 1 Flewellen on the west and Mamie Hammond's No. 1 Hamby on the east.

The Magnolia Petroleum Co. obtained permits for nine new wells. The Tidal Oil Co. staked nine new locations and the Humble Oil & Refining Co. obtained six permits. The Texas Company acquired permits for five and Golding and Murchison Oil Co. acquired permits for seven. Sun Oil Co. staked five locations while Gulf Production Co. and Prairie Oil & Gas Co. each staked two locations. Amerada Petroleum Corp. obtained three permits.

Acre-Feet Proration in Van

According to the new acre-feet proration order issued by the Railroad Commission for prorating the Van Field, Van Zandt County, the total productive acres to minus 2,500 feet in the main part of the field is 3,257.13, of which the Pure Oil Co. holds 2,723.75 acres, the Humble Oil & Refining Co. 31.15 acres, the Shell Petroleum Corp. 141.24 acres, Sun Oil Co. 99.93 acres, The Texas Company 256.31 acres and 4.75 acres on three other miscellaneous leases. The total productive acre-feet is 749,046.55 for the Pure Oil Co., 6,865.46 for the Humble Oil & Refining Co., 70,482.77 for the Shell Petroleum Corp., 47,969.12 for the Sun Oil Co., 78,156.77 for The Texas Company and 1,483.77 for the three miscellaneous leases. These total 954,004.44 acre-feet.

The Pure Oil Co. is given an allowable of 31,890.50 bbls. per day in this district and 4,640.62 bbls. in the Carroll district. Humble Oil & Refining Co. gets 336.74 bbls. in the former and 4,393.65 bbls. in the latter. Sun Oil Co. has an allowable of 1,892.25 bbls., the Shell Petroleum Corp. 2,788.87 bbls. and The Texas Company 3,383.96 bbls. Total allowable for the main part of the field is 40,374.22 bbls. The Carroll district has an allowable of 9,625.35 bbls. Total allowable of the entire field is 49,999.57 bbls.

The Pure Oil Co.'s No. 1-T Davis, the deep Trinity test in the northern part of the Van Field, is now standing shut down with 13⅜-inch O.D. casing cemented at 286 feet. John Mabee, Oklahoma City contractor, is drilling this test with heavy equipment such as used in the Oklahoma City Field.

Three new locations were staked in the Van Field this week by the Pure Oil Co., while The Texas Company staked one location. Rigging up and drilling commenced on these locations immediately after permits for drilling were granted. This is the most activity the field has witnessed for several months, only one rig running in the field for some time, and no drilling going on for a considerable length of time.

DAILY AVERAGE SHIPMENTS THROUGH MAIN TRUNK LINES IN EAST TEXAS

Week Ending October 20

Company, size, to—	Bbls.
Atlantic P. L. Co., 10-in., Atreco	12,386
Arkansas P. L. Co., 8-in., Shreveport	22,320
Atlas P. L. Co., 8-in., Shreveport	6,400
Gulf P. L. Co., 2-8-in., Port Arthur	32,687
Houston Oil Co., 8-in., Amigo	.....
Humble P. L. Co., 2-10-in., Shreveport	51,643
Humble P. L. Co., 2-8-in., Todd	43,565
Liberty P. L. Co., 8-in., Rusk	4,572
Magnolia P. L. Co., 10-in., Center	15,320
Magnolia P. L. Co., 12-in., Corsicana	54,464
Shell P. L. Corp., 10-in., Houston	17,014
Sinclair Tex. P. L. Co. 12-in., Teague	36,692
Sun P. L. Co., 10-in., Sun City	42,804
Texas P. L. Co., 10-in., Douglass	30,585
Tex. Empire P. L., 12-in., Port Arthur	20,456
Tidal Ref. Co., 6-in., Carthage	6,154
Total	396,970

SHIPMENTS TO EAST TEXAS REFINERIES

Week Ending October 20

	Bbls.
Arrow Ref. Co., Overton	643
Beacon Ref. Co., Henderson	1,595
Boone Ref. Co., Arp	321
Central Ref. Co., Friars Switch	S.D.
Constantin Ref. Co., Overton	S.D.
East Texas Ref. Co., Longview	8,318
East Texas Ref. Co., Friars Switch	6,682
Gladetex Ref. Co., Gladewater	163
Gladewater Ref. Co., Gladewater	214
Kilgore Ref. Co., Kilgore	678
W. B. Mackey (was Indian State Ref. Co.), Gladewater	362
Overton Ref. Co., Overton	768
Rusk Ref. Co., Overton (S.D.)	187
Sinclair O. & G. Co., Longview	1,535
Slack Ref. Co., Camp Switch	S.D.
Southern O. & R. Co., Reed Switch	530
Taylor Ref. Co., Tyler	3,414
Total	25,320

SHIPMENTS BY TANK CAR FROM EAST TEXAS

Week Ending October 20

Company, from—	Bbls.
Houston Oil Co., Kilgore	1,978
East Texas Ref. Co., Longview	90
Cherokee Chief, Gladewater	245
Pilot Oil Co., Willow Springs	643
Shell Pet. Corp., Willow Springs	253
Tyler P. L. Co., Tyler	430
Total	3,639

Total daily average distribution	425,937
Total daily average production	400,286
Daily average from storage	25,650

East Texas' Average Price

In an attempt to ascertain the weighted average price of crude oil in the East Texas fields from the beginning up to October 14 of this year a statistician has delved into a mass of pipe line statistics and refinery records of pipe line shipments, and price at the well paid by the various purchasers week after week through the first year of the life of the field. Out of the mass of figures it is developed that for 71,485,361 bbls. of crude oil delivered by pipe lines and tank car shipments, producers and royalty owners were credited with $25,170,935, or a small fraction over 35 cents per barrel. The prices as of record ran all the way from $1.07 down to 6½ cents per barrel. There is no record of the reported sales around 2½ to 6 cents per barrel, which included only a very small part of the total production.

The lowest recorded prices were paid in that period between June 24 and August 19, the prices averaging from 13 cents per barrel in the week of August 24 to 17 cents as the average for the week ending August 19. The highest price paid was in the early days of the field when $1.07 was paid for some of the crude The recent average price, since the establishment of a 68-cent posted price for 39 gravity crude, has been 67 cents per barrel. Contracts for oil at prices below the regular Mid-Continent price

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EAST CENTRAL TEXAS WILDCATS

Week Ending October 26

ANDERSON COUNTY

Company, well, farm name, section and block—	Remarks:
Riango Oil Co.'s No. 1 J. Lynn, 1,400 ft. from NE line and 7,425 ft. from E line of survey, R. Brown Sur.	Shut down 2,755 ft.
H. B. McConnell et al's No. 1 N. B. Watson, 500 ft. from W line and 4,850 ft. from N of S line of survey in S half of 129-ac. tract, M. Main Sur.	Rig up and shut down.

BOWIE COUNTY

Tom Bell's No. 1 Merritt, 1,225 ft. from N and 575 ft. from E line of survey, T. S. McKinney Sur.	Coring 3,340 ft.
Logan and Elliott's No. 1 J. W. Smith, 9,600 ft. S and 2,500 ft. W of NE cor. of survey, Charles Lewis Sur.	Shut down 4,503 ft.
Tarkington-Jones et al's No. 1 W. W. Whybark, 200 ft. from S and W of SW cor. of J. A. Dyer Sur.	Drlg. 1,423 ft.
Lee Timberlake et al's No. 2 Julius N. Tidwell, 655 ft. from E and 2,510 ft. from S of survey in L. M. Rice Sur.	Salt water on drill stem test; shut down 3,012 ft.

CHEROKEE COUNTY

Bridges and Candler's No. 1 Berryman, center of Berryman tract, H. Kimble Sur.	Shut down 1,000 ft.
Denman et al's No. 1 Mrs. Renfroe, 330 ft. N of S line and 330 ft. E of W line of farm, Uriah Moore Sur.	Derrick.
Walton Oil Co.'s No. 1 Singleton, 250 varas W and 150 varas N of NE cor. of Morton Lacy Sur. in the T. Walters Sur.	Shut down 2,960 ft.
Wilson & Stubbs' No. 1 L. Robart, 450 ft. from S and 150 ft. from W of lease, J. B. Wolfin Sur.	Drlg. 100 ft.

DALLAS COUNTY

Paris' No. 2 Wilkinson, 2,787 ft. from NW and 3,241 ft. from SW of John P. Anderson Sur.	Total depth 1,230 ft.; shut down.
Joe Wilson's No. 1 fee, 600 ft. from N line and 600 ft. from W line of 1,500-ac. tract, John Scroggy Sur.	Location.

DELTA COUNTY

Worthington et al's No. 1 Pejernett, 776 ft. from S and 150 ft. from W in E. Chick Sur., 1½ miles W of Horton	Shut down 3,315 ft.

ELLIS COUNTY

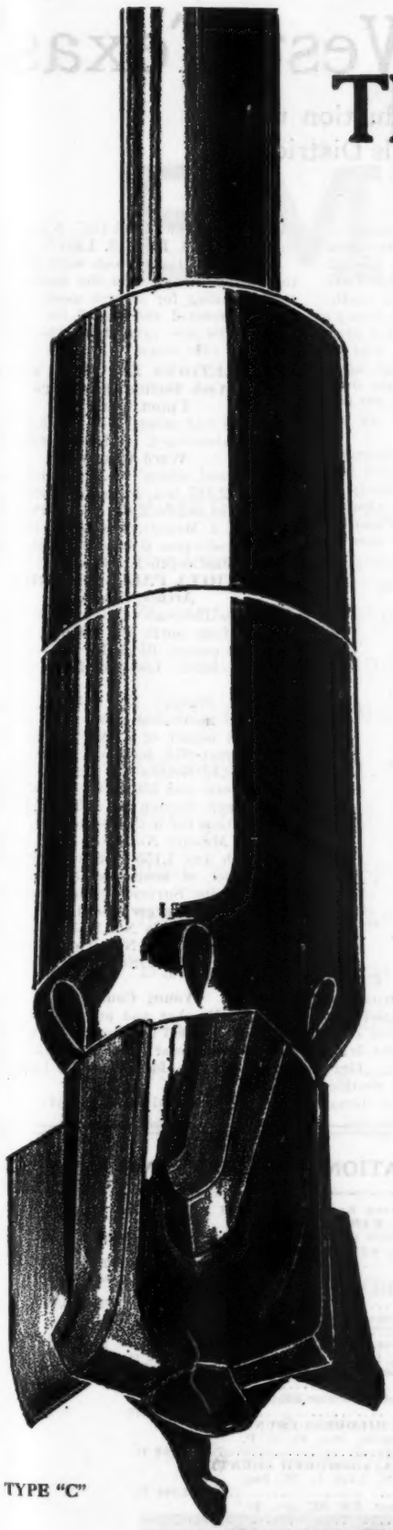
Cark Brooks' No. 1 C. W. Golliday, 300 ft. from S line and 300 ft. from E line of tract and survey, John Bones Sur.	Drlg. 950 ft.
Community Oil Co.'s No. 1 Nash	Derrick.
E. M. Roger's No. 1 John Lee Winn, 1,650 ft. from E and 510 ft. from S of Orland, Orlo Wheeler Sur.	Shut down 1,435 ft.
Worthen Pet. Co.'s No. 1 Cerf, 2¼ miles NE of Ennis	Preparing to set casing 2,310 ft.

FRANKLIN COUNTY

Tom Harper's No. 1 fee, 150 ft. from N line and 200 ft. from E line of 116-ac. tract, W. M. Dawson Sur.	Derrick.

(Continued on Page 85)

This EXTRA Advantage



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There is the EXTRA Advantage that Roller Cutter Heads can be used with the Perfection Core Barrel, by the use of Type "M" Bit Body. Just another convenience for the owners of Brewster equipment!

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New Locations Made in West Texas

Southern Ward County Test Increases Gas Production to 2,500,000 Feet. Increasing Activity in Wichita Falls District

By L. E. Bredberg
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Oct. 26.—Two locations were staked in West Texas this week, one by Sid Richardson and others on the Sealy ranch in Section 92, Block A, G.M.M.B.&A. Survey, 3 miles from the Ward County line, and slightly over a half mile north of Danciger Oil & Refining Co.'s No. 1 Sealy dry hole. It is also approximately 4½ miles east of production which lies along the Ward-Winkler County lines on the O'Brien and Edwards lands.

Fisher County also got another location this week when Cranfill & Reynolds obtained permit to drill on the Sipe farm in Section 195, Block 1, B.B.B.&C. Survey in the northeastern corner of the county, near the Royston Pool. Three other contracts were said to have been signed for drilling three tests in this area. Two are supposed to be drilled on Continental Oil Co. acreage and one on Humble Oil & Refining Co. acreage.

Penn Oil Co. and others' No. 1 Tubbs in Section 3, Block B-27, western Crane County, encountered another small showing of oil this week, at 3,128-35 feet. It is drilling ahead at 3,180 feet. Some 2,500,000 feet of gas was formerly encountered at 2,830 feet, and a showing of oil was logged at 2,918 feet, and 2,992-95 feet.

Southern Ward County

Stanolind Oil & Gas Co.'s No. 1 Brown in Section 26, Block B-29, southern Ward County, topped gas sand at 2,208 feet this week, striking 1,000,000 feet of gas, which increased to 2,500,000 feet when hole was drilled to 2,228 feet. Tools were blown up the hole, but were recovered and drilling resumed. The test is in the Texas Pacific Coal & Oil Co.'s Barker area which was opened up by this company's 135-bbl. well in Section 27, several months ago. Since the discovery of that well several other wells have been drilled in the area around it, extending production, and enlarging the producing area between the Shipley and Bennett Pools. The Stanolind test is 1 mile northeast of the Barker discovery well, and is correlating similarily to that producer.

There are four old producers in the Settles Pool, Howard County, being deepened at the present time, after production entirely fell off, or after the wells started making 100 per cent water. The American-Maracaibo Oil Co. is deepening its No. 1-C Settles in Section 6, Block 32, Township 2s, T.&P. Survey; the Continental Oil Co. is deepening its No. 6-A Settles from 2,220 feet; Cardinal Oil Co.'s No. 3 Settles is preparing to deepen from 2,272 feet, and Merrick & Lamb's No. 2 Chalk has been deepening. It is located in the north end of the Chalk Pool, in Section 125, Block 29, W.&N.W. Survey. Cardinal Oil Co. formerly deepened its No. 1 Settles, increasing production to 65 bbls. per hour on a two-hour test. Other wells in this area will be deepened from time to time as water increases, or as production falls off and deepening is considered necessary. The low market and small allowable for the field precludes much deepening work at the present time.

Due to the Yates Pool, Pecos County, cut to 65,000 bbls. per day by the recent proration order of the Railroad Commission, production fell off approximately 4,000 bbls. per day in that pool during the week. Howard-Glasscock Counties also showed a decrease of almost 2,000 bbls. per day, helping to bring the daily average production of the Permian basin down 7,000 bbls., the largest decrease registered in the district for a considerable length of time.

Wichita Falls District

Drilling activities in the Wichita Falls district continue to increase, recent rains helping to bring relief to the area by furnishing plenty of water for drilling purposes. Drilling was slowed up a few weeks by lack of water. Archer County continues to be the most active county in the district, and four locations were staked this week, adding to the county's activities.

Young County also is spurting ahead in activities, with 12 locations staked in the county this week to add to the number of wells now going down in the different areas, mostly in the shallow Larimore and Jeffery Pools, near New Castle.

Deep Oil Development and Lindsay's No. 15-A Wilson in the Chalk Hill area, Archer County, which has been held up for lack of water for drilling, has again resumed drilling at 5,500 feet, the owners contemplating drilling it to 6,500 feet or deeper. They hope to pick up the Oklahoma City pay horizon.

The Wichita Falls district increased 3,137 bbls. per day during the week to a total of 65,873 bbls. The majority of this increase came in Archer County, Wichita, Wilbarger and Young Counties, several of the other counties also showing slight increases.

WEST TEXAS PRODUCTION
Week Ending October 24

County—	No. wells	Prod.
Crane	377	15,919
Crockett	51	1,109
Ector	78	6,721
Fisher	11	940
Garza	2	0
Howard-Glasscock	544	26,367
Irion	9	60
Jones	87	1,412
Loving	46	3,712
Mitchell	111	1,764
Pecos	549	68,375
Reagan	355	24,239
Runnels	5	65
Scurry	5	0
Upton	263	4,633
Taylor	3	56
Ward	69	3,705
Winkler	595	36,924
Total production this week		196,004
Total production last week		202,487
Decrease		6,483

Panhandle District

Activities in the Panhandle district have not increased materially during the past several weeks, but the district has averaged a couple of new locations each week, two more being added to the drilling report this week. These are: Graham and others' No. 1 Webb in Section 62, Block 25, H.&G.N. Survey, in Gray County, and Jewell Oil Co.'s No. 1 Meers in Section 106, Block 3, I.&G.N. Survey.

Several locations which were staked in the various counties in the district have been standing for several weeks without derricks erected and rigged up. Several other wells are carried on the drilling report as shut down.

COMPLETIONS IN WEST TEXAS
Week Ending October 26

Upton County

Rankin and others' No. 1 Union Land, dry and abandoned, total depth 4,006 feet.

Ward County

Black and others' No. 1 Hall-Roberts, top pay 2,445 feet, initial production 126 bbls., total depth 2,455 feet. Peck-Fuglar's No. 1 Merritt, top pay 2,155 feet, initial production 6 bbls. through 2-inch tubing, total depth 2,234 feet.

WICHITA FALLS DISTRICT

Archer County

Thomas Holcomb's No. 1 M. E. Chiles, 660 feet from north and 660 feet west of southeast corner, Block 19, Denton County school land. Location for a 650-foot test.

W. H. Jenkin's No. 1 W. J. Logan, 150 feet north and 150 feet west of southeast corner of J. M. Taylor, Block 23, Abstract 651, location.

George L. Kelly's No. 1 A. P. Nichols, 660 feet east and 150 feet north of southwest corner, Section 39, A.T.N.C.L. Survey, location for a 2,500-foot test.

W. E. Mason's No. 11 F. C. Grun, 274 feet south and 1,135 feet west of northeast corner of southwest 320 acres of James Levine Survey, drilling 700 feet.

Wilbarger County

Davis Oil Corp.'s No. 1 Garda M. McCrary, center of the N half of Section 64, Block 14, H.&T.C. Survey, cleaning out at 600 feet.

Young County

W. M. Brasher and others' No. 1 W. C. Leberman, 986 feet north and 150 feet west of southeast corner, Section 154, T.E.&L. Survey, location for a 1,000-foot test.

(Continued on Page 83)

WILDCAT OPERATIONS IN WEST TEXAS

Week Ending October 26

BREWSTER COUNTY

Company, well, farm name, section and block— Remarks:

Brewster Oil Co.'s No. 1 fee, 2,640 ft. S and 2,593 ft. E of NW cor. Sec. 45, Blk. G-15, G.C.&S.F. Sur. ..... Shut down 1,935 ft.

E. L. Chapman's No. 1 Skinner, C SW SE Sec. 100, Blk. 2, G.C.&S.F. Sur. ..... Shut down 1,302 ft.

Trans-Pecos Oil & Gas Co.'s No. 1 Jones, 930 ft. from N and 2,500 ft. from E of Sec. 18, Blk. G-15, G.C.& S.F. Sur. ..... Shut down 2,900 ft.

Van McPhail's No. 1 McIntyre, SE cor. Sec. 59, Blk. 352, 7 miles south Alpine ..... Shut down 1,750 ft.

COCHRAN COUNTY

Penn Oil Co.'s No. 1 Myrick, C Labour No. 80 of League 129, Carson County School Lands ..... Drlg. 2,010 ft.

CONCHO COUNTY

Beesley et al's No. 1 Waring Estate, 400 ft. from N and E Sec. 163, T.&N.O. Sur. ..... Shut down.

Betts & Dennis' No. 1 H. E. Woods, 710 ft. from E and 150 ft. from S Sec. 3, H.E.&W.T. Sur. ..... Shut down 80 ft.

Turner et al's No. 1 Borsig, 150 ft. from S of NE cor. G. Emmig Sur. 130, 6 miles W of Paint Rock..... Shut down 1,550 ft.

CRANE COUNTY

Southwest Oil Prod. Co. (Cranfill Bros.) & Penn Oil Co.'s No. 1 J. B. Tubb, 330 ft. from N and E of SW cor. of S 80 acres of NW cor. Sec. 3, Blk. B-27, P.S.L. Sur. ..... Drlg. 3,170 ft.; show oil 3,128-35 ft.

CROCKETT COUNTY

Doleman & Moore's No. 1 Ferner 2,135 ft. from N and 1,485 ft. from E of Sec. 36, Blk. 2, I.&G.N. Sur. ..... Spudded and shut down.

CULBERSON COUNTY

Kornrumpf et al's No. 1 Garren, 330 ft. S and W, Sec. 15, Blk. 79, Public School Land ..... Shut down 1,300 ft.

DAWSON COUNTY

Albaugh et al's No. 1 Robinson, C NW Sec. 46, Blk. M, E.L.&R.R. Sur. ..... To resume drilling.

ECTOR COUNTY

Weekly Oil Corp. et al's No. 1 Cowden, 1,980 ft. from N and W Sec. 33, Blk. 43, Twp. 2s, T.&P. Sur. ..... Drlg. 1,150 ft.

H. F. Wurts' No. 1 E. A. Ibbetson et al, 330 ft. from N and E lines of NW, Sec. 16, Blk. 46, Twp. 3s, G.M. M.Br.&A. Sur. ..... Shut down 3,280 ft.

(Continued on Page 87)

WILDCAT OPERATIONS IN TEXAS PANHANDLE

Week Ending October 26

CARSON COUNTY

Company, well, farm name, section and block— Remarks:

Empire G. & F. Co.'s No. 1 Poling, 1,320 ft. S and W, Sec. 28, Blk. Y-2, T.T.R.R. Sur. ..... S.D. 2,725 ft.; T.P. 2,515 ft., 12,800,000 ft. gas.

Magnolia Pet. Co.'s No. 1 Connell, 330 ft. N and E, SE, Sec. 66, Blk. 4, H.&G.N. Sur. ..... Drlg. 2,625 ft; T.P. 2,565 ft; 58,000,000 ft. gas.

Texhoma Nat. Gas Co.'s No. 1 Harrison, center NW, Sec. 46, Blk. 4, I.&G.N. Sur. ..... Spudded.

Texhoma Nat. Gas Co.'s No. 1 Dover, 1,335 ft. from S, 656 ft. from W, Sec. 81, Blk. 4, I.&G.N. Sur. ..... Drlg. 1,110 ft.

Texhoma Nat. Gas Co.'s No. 1 McLaughlin, center NW, Sec. 61, Blk. 4, I.&G.N. Sur. ..... Drlg. 2,220 ft.

Texhoma Nat. Gas Co.'s No. 2 Schoffer, center SE, Sec. 64, Blk. 4, I.&G.N. Sur. ..... Drlg. 1,950 ft.

C. L. Sloan et al's No. 1 B. P. Smith, Sec. 49, F. P. Knott lands ..... T.D. 5,000 ft.

COLLINGSWORTH COUNTY

Dixon et al's No. 1 Bell, 330 ft. N, 1,320 ft. W, Sec. 102, Blk. 21, H.&G.N. Sur. ..... S.D. 2,508 ft.

Downey et al's No. 1 Beasly, SE cor. SW SE, Sec. 95, Blk. 15, H.&G.N. Sur. ..... Rigged up.

DEAF SMITH COUNTY

Western Union Oil Co.'s No. 1 Farwell, center NW, Sec. 18-3n-2e ..... Moving in rotary.

GRAY COUNTY

Anderson et al's No. 2 Vollmert, 330 ft. N and W, SW, Sec. 140, Blk. 3, I.&G.N. Sur. ..... Rigging up rotary.

Back & Barber's No. 1 Back, 660 ft. from S and 330 ft. from W, Sec. 140, Blk. 25, H.&G.N. Sur. ..... Rigging up rotary.

Boyes et al's No. 1 Colebank-Morse, 330 ft. NE, Sec. 65, Blk. 25, H.&G.N. Sur. ..... Spudded and S.D.

Brown et al's No. 1 Duncan, 330 ft. S and E, NW, Sec. 92, Blk. 3, I.&G.N. Sur. ..... Drlg. 2,242 ft.

Parton Holt and Shell Pet. Corp.'s No. 1 Morse, 330 ft. S and E, Sec. 6, Blk. 26, H.&G.N. Sur. ..... Drlg. 1,835 ft.

Jean Pet. Co.'s No. 1 Furneaux Bros., 330 ft. N and W, cor. SE, Sec. 200, Blk. B-2, H.&G.N. Sur. ..... 6,000,000 ft. gas at 2,825-50 ft. S.D. 3,005 ft.

Graham et al's No. 1 Webb, 330 ft. from N and E of E half NE, Sec. 62, Blk. 25, H.&G.N. Sur. ..... Location.

Jewel Oil Co.'s No. 1 Meers, 330 ft. from S and W of NW SW, Sec. 106, Blk. 3, I.&G.N. Sur. ..... Location.

(Continued on Page 87)

EMERGENCY

WHEREVER it's needed on the lease, a winch-equipped "Caterpillar" Tractor lends a willing line and husky power. The Bell and Graddy fire was attacked through a tunnel 170 feet long — the "Caterpillar" hauled out the loaded cars. Back to humdrum jobs next week—hauling, swabbing, digging — always ready for the emergency!

Prices—f. o. b. Peoria, Illinois

TEN . . .	$1100	THIRTY .	$2375
FIFTEEN .	$1450	FIFTY . .	$3675
TWENTY .	$1900	SIXTY . .	$4175

Caterpillar Tractor Co., Peoria, Illinois, U.S.A.
Track-type Tractors Road Machinery
Combines
(There's a "Caterpillar" Dealer Near You)

CATERPILLAR
REG. U. S. PAT. OFF.
TRACTOR

Pipe Line Construction News

ORDER IS BOOKED FOR 125 MILES OF 8-INCH

By B. E. V. Luty

PITTSBURGH, Pa., Oct. 24.—National Tube Co. has booked about 125 miles of 8-inch welded line pipe, about 8,400 tons, from an unnamed buyer, apparently for an oil line. It is still stated that there is no formal inquiry before the pipe trade for the 170 miles of 20-inch required for the proposed extension of the Texas-Chicago gas line to Milwaukee, but it is believed the project is a live one, despite the time of year, for it is recalled that the same company, Continental Construction Co., kept at work right through the bad weather.

Standard or merchant pipe has held its own in demand in the last couple weeks, not showing further seasonal increase as might have been expected. There is a distinct increase over July.

Santa Fe's recently predicted inquiry for rails for next season has just appeared, and is for 40,000 tons. Recently the Erie inquired for 35,000 tons and Louisville & Nashville for 20,000 tons. The general rail buying movement is hardly under way yet, but a few weeks ago Chesapeake & Ohio ordered 45,000 tons, some of the rails to be rolled the latter part of November and during December. Chicago & Illinois Midland has ordered 750 freight cars from Pullman. Not all the rails contracted for a year ago were taken out and releases from some roads are accumulating, promising heavier rail production next month, production having been almost nothing in the last few weeks.

Following the recent Ford purchases there have been other steel purchases by the automobile industry, chiefly for deliveries beginning late this month or early in November, so that in actual production the steel trade has not yet felt the influence.

Two or three weeks ago some of the farm implement makers began buying steel somewhat more freely, and orders from that quarter have since increased farther, indicating inception in a mild way of the regular manufacturing season, making implements for spring distribution and use.

Steel ingot production last week was at about 26 per cent of total capacity, against 27 per cent the week before and 28 per cent for several weeks preceding. Last week's decrease was caused by a drop in the Chicago district to a 25 per cent rate, the district having averaged around 30 per cent during September.

Some observers think it probable that this month will prove to have been the low month in steel production, improvement being expected for November and December on account of special conditions. Ordinarily there is seasonal decrease in those months, followed by a sharp upturn immediately after January 1. In particular there is indicated more activity in automobile and farm implement steel and in rails.

The steel trade continues in the conviction that the bank aid plan will have an important influence upon business generally whereby the turning point from the general recession may be falling at the present time. There is no little demand for steel even though percentage rates of operation of the steel industry appear very low, the point being that there is a larger capacity than has ever been utilized and a much larger capacity than actual production on an average in the past. At 26 per cent steel ingots are being produced at 17,500,000 gross tons per annum, representing 14,000,000 to 15,000,000 net tons of finished mill products.

The demand is of widely miscellaneous

(Continued on Page 84)

KANSAS ABANDONS MOVEMENT FOR FEDERAL REGULATION OF PIPE LINES

TOPEKA, Kans., Oct. 24.—The Kansas Public Service Commission, which has been agitating for Federal regulation of interstate gas pipe lines, has asked that the measure it drafted and presented to Congress be forgotten, for the time being at least. The United States courts have given the State some rights to inquire into the reasonableness of the rates and the charges for services rendered by interstate corporations, and the Kansas commission now is urging that the states hold to this position and seek to strengthen it.

Following the decisions of the United States District Court in Kansas in the Wichita gas case, in which it was held that the State could not attempt to regulate the interstate gas pipe lines, Charles Steiger, attorney for the commission, drafted a bill for Federal regulation. Senator Arthur Capper introduced the bill in the last Congress. The convention of public utility commissioners of all the states joined in urging the passage of the bill, which created a new commission to regulate pipe lines operating between states.

The Kansas commission has sent Earl Hatcher, assistant attorney, to Washington to attend the conference of public utility commissioners of all the states and point out why Kansas has changed its views entirely about Federal regulation and is seeking the help of the states to prevent it.

Reasons for Change

"Recent decisions have changed the attitude of Kansas toward Federal regulations in interstate gas pipe lines," said Mr. Hatcher, in a prepared statement presented to the conference. "In the Pennsylvania gas case the courts held that where an interstate pipe line also owned the distributing plant and sold directly to local consumers, the state could make reasonable regulations.

"Following the decision in the Pennsylvania case, the utilities built up the practice of forming holding or affiliated companies. One company owned and transported the gas through the pipe line in interstate commerce. A subsidiary or affiliated company was formed which purchased the gas at the city gate and distributed it to the local consumers.

"Contending that the companies were separate entities and that the pipe line was dealing purely in interstate commerce, the pipe line company successfully for a time prevented any regulation or investigation of the reasonableness of the pipe line rate. The companies being owned and controlled by the same individuals and operated by the same officers, it was possible to charge an unreasonable price for gas at the city gate, which was passed on to the local consumers in the form of expense for gas purchased by the distributing company.

"It was to check the possibility of this abuse that the bill to create a Federal gas pipe line commission, and to provide for the regulation of the rates and service of utilities operating gas pipe lines in interstate or foreign commerce was suggested.

"Recent decisions indicate that the courts have recognized the possibility of abuse of this system, and have made state investigation possible. It is, of course, true that the reasonableness of prices paid by a distributing company to a holding or affiliated company has always been subject to question by state commissions. The test, however, by which the reasonableness of such contracts were measured was so unsatisfactory as to render regulation ineffective.

"If the distributing company testified that the service or commodity furnished was worth to the utility what it paid, or that the service could not be obtained elsewhere at a lesser price, the reasonableness of the contract was satisfied. Where the holding company had practically a monopoly on the service rendered, such as a gas pipe line in a particular territory, it was impossible to show other service available.

Not to Give Up Local Rule

"In the Smith case, Chief Justice Hughes indicates that there is to be a new test of the reasonableness of prices paid to holding or affiliated companies.

"If it is possible for the states to determine the reasonableness of the price at which gas transported in interstate pipe lines is sold, it certainly is not the desire of the states to give up local rule in favor of a growing tendency toward national regulation of local police problems. Several states are now taking action to recover the state control that was lost for a time by the holding and affiliated company set-up.

"The state must strive to solve its own problems, rather than extend the powers of the Federal Government. Where there is possible relief through state agencies, we should oppose any move to subject us further to the autocracy of a constantly growing bureaucracy which even the Federal Government does not desire.

"We should strive to retain for the states the regulation of matters which are local in character, and rather than apply to the Federal Government for regulation of our pipe lines, which is purely local in character, we are inclined to believe we would be in better position, in view of the present decision, were we petitioning Congress to remove any obstruction which would prevent such regulation under the state police power.

"We cannot be made to believe that the state cannot safely be intrusted with this regulation. These industries are a part of the state. Their growth and success should be, and is, a matter of state benefit and pride.

"State commissioners are not likely to forget that they have a duty to perform to the utility as well as to the customers which the utility serves, and that the rights and property of the utility must be protected if they are to continue to grow and be in a position to properly serve the public. It is only when these utilities reach the place where they think they are beyond regulation, both by the state and the Federal Government, that difficulty arises, and if this regulation were properly placed under the control of the state, that difficulty would not be in a position to occur.

"It is our opinion that we are now in position to control these Federal gas pipe line agencies by state regulation, and we should strive to strengthen and improve our position rather than give up what we have in favor of regulation by the national government."

Association Approves

RICHMOND, Va., Oct. 26. — No further efforts will be made by the state commissions regulating public utilities to secure the enactment of federal legislation for control of natural gas pipe lines, it was decided here by the National Association of Railroad and Utilities Commissioners.

The action resulted from a complete reversal of the position of the Kansas Public Service Commission, which sponsored the introduction at the last session of Congress of a bill by Senator Capper of Kansas for the creation of a federal pipe line commission.

Following the presentation of the position of the Kansas commission, J. Paul Kuhn of Illinois moved that further action by the association in the matter of federal legislation covering natural gas pipe lines be deferred and the motion was adopted unanimously.

NORTHERN NATURAL GAS CONSTRUCTION WORK

Construction work on North Natural Gas pipe lines continues at a rapid rate of speed.

Construction crews are now at work on 420 miles of main and branch lines in Kansas, Nebraska, Iowa, Minnesota and South Dakota.

The 16-inch line from Mason City to Owattona, Minn., which is now under construction, has crossed the Iowa-Minnesota state line. Twenty-eight miles of this 65-mile line to serve southern Minnesota has been built already. The 86 miles of 14-inch line is under construction to Sioux Falls. On the 183-mile 26-inch line to Mullinsville from Clifton, Kans., 52 miles remains to be completed.

Sixty-six miles of branch line is being constructed in Nebraska to Wayne, Wakefield, Emerson, Adams, Wymore, Blue Springs, Elkhorn, Valley and Waterloo.

Twenty miles of branch line in Iowa is being constructed to bring service to Glenwood, Exira, Audubon, Dayton, Pilot Mound and Boxholm.

Northern Natural Gas has 1,381 miles of line completed, of which 102 miles were completed during September. The 420 miles of line under construction now will bring the total mileage to 1,801. The distribution system mileage, which will total several hundreds of miles, is not included in the above figures. Following is the mileage, as of October 1:

State—	Main line	Branch	Total	Under const.	Total
Texas	78	...	78	...	78
Oklahoma	47	...	47	...	47
Kansas	89	243	332	183	515
Nebraska	221	345	566	66	632
Iowa	206	152	358	40	398
Minnesota	...	...	...	45	45
S. Dakota	...	...	...	86	86
	641	740	1,381	420	1,801

TEXAS PIPE LINE PLANS MARKHAM FIELD LINE

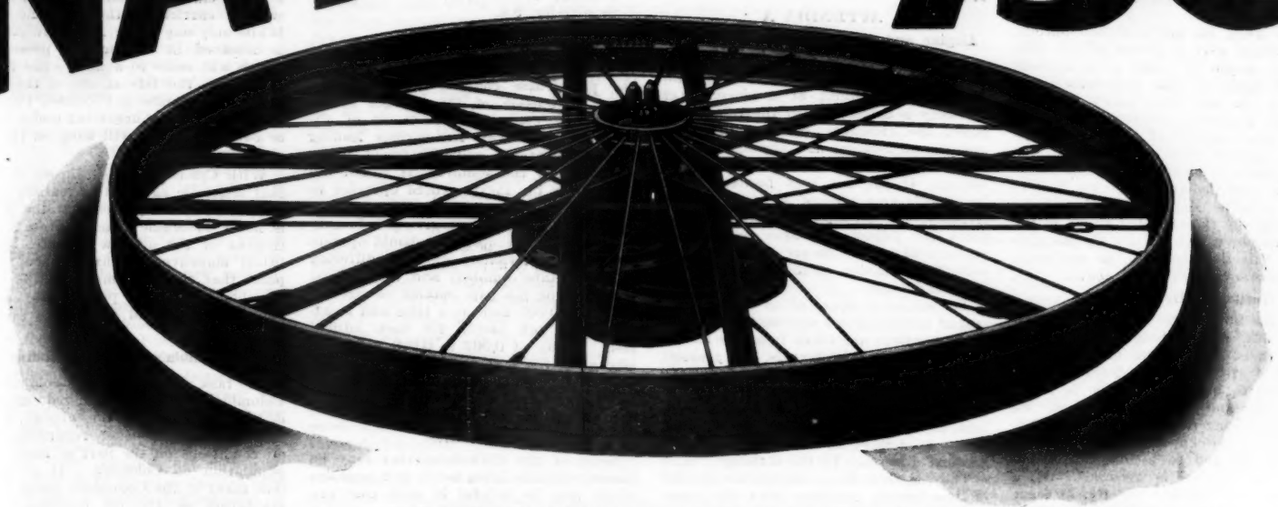
HOUSTON, Tex., Oct. 26.—The Texas Pipe Line Co. has decided to go ahead with the laying of a 21-mile stretch of pipe to connect the Markham Field of Matagorda County with its West Columbia-Houston pipe line and now is preparing to let contracts. The new pipe will be 4-inch and will extend from Bay City to West Columbia. From Bay City, where the company has loading racks, a combination 2, 4 and 6-inch line already is in use serving the loading rack.

Although The Texas Company has no production of its own at Markham it has been the principal buyer in that field. However, it has had no pipe line outlet except to the loading rack, from where the oil is moved by tank car. Markham is one of the older fields of the coast, its history dating to 1908, but not until recently has there been much indication of enough production to justify a pipe line.

GAS SUPPLY FOR McCAMEY

FORT WORTH, Tex., Oct. 26.—Through a contract signed recently by the Southern Union Gas Co. with the Texas Public Service, McCamey distributors, McCamey, Tex., has obtained sweet gas for domestic and industrial use. The new gas supply comes from the Big Lake Pool in Reagan County, and a 4-inch pipe line connects to the main line between Texon and Girvin, Tex. McCamey has heretofore been using sulphur gas.

THE NATIONAL 15C



100 H. P. - - - FOR WELLS UP TO 4000 FEET DEEP

National's 15C Bandwheel Power makes possible the economy of central powerhouse operation for pumping deep wells that ordinarily would require standard rigs and individual engines.

Long, continuous, economical and dependable service is assured by the simple design, rugged construction and the fully enclosed flood oiling system exclusive on National Pumping Powers.

Descriptive Bulletin No. 1B

Sent free on request

THE NATIONAL SUPPLY COMPANIES

RECOMMENDED PRACTICE FOR CONDUCTING TESTS

(Continued from Page 17)

by determining the compression ratio at which incipient knock occurs, and then increasing the compression ratio by 1.0 unit[6].

Experience on the engine may make it necessary to change this recommendation.

Mixture-Ratio Adjustment

When using the knockmeter it is unnecessary to take readings over a fixed period of time. To find the adjustment for maximum knock, note the meter reading and the micrometer setting. Then turn the micrometer screw and note whether the meter readings go up or down. Slowly turn the micrometer in the direction in which the knock increases until the knock passes through a maximum. Check the point at least three times and set the micrometer at the position of maximum knock.

When using the gas evolution burette, two readings over a period of one minute each should be taken as a measure of knock intensity. The carburetor is adjusted to the maximum knock position, as in the preceding paragraph, by turning the micrometer and taking two one-minute readings at each position.

Next place a blend of the low reference fuel and the high reference fuel in another gasoline container, estimating the proportions by the expected knock rating of the unknown fuel. Adjust the micrometer for this float bowl to the maximum knock position as indicated above.

Antiknock Determination

With the float bowls thus set for maximum knock, take alternate readings on the two fuels. At least one minute should be allowed after changing from one fuel to another to allow the engine to reach equilibrium, and with certain fuels an appreciably longer interval is required. When using the knockmeter, the needle should be allowed to become stationary before the reading is recorded. When using the gas evolution burette, at least two successive one-minute readings should agree.

Take at least three alternate readings on each fuel. If the average of the readings on the unknown sample is higher than the average on the reference fuel blend, repeat the readings with a blend containing a greater proportion of the low reference fuel. If the average of the readings on the unknown sample is lower than the average on the reference fuel blend, repeat the readings with a blend containing a greater proportion of the high reference fuel. Continue in this manner until the readings on the sample are definitely higher than one blend and lower than another blend. For this bracket a value of two octane numbers is recommended as representative of the size now used by most laboratories[6]. The antiknock value of the sample is obtained by interpolation of the figures so recorded, and is reported as the nearest whole number.

When changing fuels in the containers, drain the previous fuel completely by means of the drain cock provided. Allow a small portion of the new fuel to flow through the line before closing the drain cock.

Maintenance

In the operation of the testing apparatus, it is recommended that a systematic schedule of inspection be carried out with the utmost care. Weekly inspections may be found advantageous from the standpoint of consistency of results.

Bouncing Pin.—Tighten diaphragm retaining nut and clean off any carbon accumulation. In time the diaphragm will lose its temper and need replacement. These conditions manifest themselves by an irregular gas evolution or lack of sensitivity.

Breaker Point Clearance.—The breaker point clearance should be checked and any pits which have formed dressed off.

Spark Plugs.—The spark plugs should be cleaned and the porcelain inspected for cracks. The gap should be checked.

Fuel System.—Flush out the fuel system and make sure there is no accumulation of foreign matter in the fuel containers, float bowls, lines or carburetor.

Cooling System.—Inspect for leaks, tighten or replace the pump packing as required.

Combustion Chamber.—Inspect piston and cylinderhead for character of carbon deposits. Excess carbon should be removed mechanically.

Compression Pressure.—The compression pressure while motoring at 600 r.p.m. should be checked with a compression gauge. The cause of any abnormal change between inspections should be investigated and corrected.

Valves.—Tappet clearances should be checked and valves reground when not seating.

APPENDIX A

Engine and Bouncing Pin Adjustment

Adjustment of Bouncing Pin

(a) The current flowing through the bouncing pin circuit at a given knock intensity is determined by the voltage applied, the clearance between the gaps, and the adjustment and physical properties of the diaphragm and the various springs. It has not been found possible to manufacture pins of identical characteristics. No definite systematic instructions for adjustment have been found which will always secure the desired result. A description of the procedure may be illuminating.

The engine is operated on a fuel of 74 octane number under standard conditions. Sixty readings are taken from the knockmeter at 10 record intervals. The greatest difference between any two of the 60 readings is recorded, together with the average difference of consecutive readings, known as the stability. The stability factor is defined as the product of the greatest difference by the stability.

The engine is then checked for quality of knockmeter readings with the same fuel on both sides of the carburetor, and is then operated on a fuel differing from the first one by about 0.5 octane number (74.5).

The sensitivity is the difference in average knockmeter readings for the fuels of 74 and 74.5 octane number.

The pin factor is then defined as the ratio of the sensitivity to the stability factor. The pins are adjusted until they show a pin factor of about 5.0 under the specified conditions, and are then considered to give good knock testing operation.

Quite satisfactory knock testing may be secured with pins showing a pin factor of much less than 5.0, provided the highest degree of precision (fractions of an octane number) is not required.

The following data represent the average of 30 bouncing pins after adjustment:

Greatest difference in knockmeter readings, 3.6.
Stability, 0.45.
Stability factor, 1.70.
Sensitivity, 8.4.
Pin factor, 4.95.

The pin factor may be greatly changed by very small changes in adjustment of the pin. These changes include adjustment of tension of the plunger spring above the contacts, adjustment of the tension of the two leaf-springs leading from the contacts, and adjustment of the gap between the contacts. It is not advisable for the inexperienced operator to attempt[6] to adjust the various springs, but if the pin does not give satisfactory performance, the operator should operate the engine alternately on fuels differing by one octane number, and then adjust the bouncing pin gap, making changes of less than 0.001 inch at a time and measuring the pin factor for each adjustment. A gap of 0.007 to 0.009 inch usually gives the best results, but a difference of 0.001 inch may sometimes make all the difference between satisfactory and unsatisfactory results.

Difficulties

Some of the difficulties that may be encountered are listed below and remedies which may be helpful in each case are suggested in the parallel column.

Difficulty	Remedy Suggested
Gas evolution too large, acid becoming entrained above the gas in the graduated burette.	(a) Reduce degree of knock by lowering compression ratio or by closing throttle. (b) Examine bouncing pin diaphragm and make sure that it is seated squarely and the retaining nut made fast.
Gas evolution too small.	(a) Increase degree of knock by raising compression or opening throttle. (b) Examine pin and make sure that it is clean and free to move.
Bouncing pin readings have a tendency to drift in one direction.	(a) It is possible that equilibrium temperature has not yet been reached. Continue to take readings for 10 minutes. Readjust compression ratio or throttle as necessary until readings become constant.
Bouncing pin readings vary over such a wide range that sensitivity is obscured.	(a) Make sure that there is no entrained air or gas bubbles or dirt in the carburetion system. (b) Make sure that the contact surfaces are clean. (c) Examine the diaphragm and clean the pin with kerosene. (d) Examine the pin in the contact adjusting screw and make sure that it is not binding at times.
Engine missing. Missing cannot be tolerated. An engine that misses only once every hour cannot be used for knock testing.	(a) Examine ignition system for (1) leaks to ground; (2) carbon on spark plug; (3) spark plug points too far apart; (4) test spark outside of engine to make sure that the coil is in good condition; (5) examine breaker system for loose parts.

[5]Details of adjustment of the bouncing pin and instructions for dealing with difficulties in its operation are contained in Appendix A.

[6]This tentative recommendation is made with the understanding that the bracket size will be changed when and if further research so justifies.

MR. AND MRS. ALSBAUGH DEAD

A. B. Alsbaugh, of Borger, Tex., division superintendent of production for the Prairie Oil & Gas Co. in the Panhandle fields, died Thursday, October 22, following a brief illness of botulism, a form of ptomaine poisoning. Mrs. Alsbaugh died two days earlier. Mr. and Mrs. Alsbaugh had eaten beet greens on Sunday evening and she became very ill shortly afterward. While physicians were attending her Mr. Alsbaugh became sick. An analysis of the beet greens, which Mrs. Alsbaugh herself had canned, developed the fact that they were in a poisonous state. General Superintendent John A. Wolfe of Tulsa left for Amarillo on Tuesday and accompanied the bodies to Warren, Ind., where funeral and burial services were held on Saturday.

FORCE SHOWDOWN ON COLOMBIA OIL LAW

(Continued from Page 25)

reasonable laws or the virtually complete withdrawal of these companies from Colombia.

An early test of the provisions of Law 37 is indicated with one of the major American companies a litigant. Under the provisions of Law 37, an operator is required to prove ownership of oil underlying the land to be drilled before operations are started. Following the filing of such a claim, supported with proofs, the government requires 60 days for consideration of the claim, and reserves the right to refer such claims to the Colombian Supreme Court for adjudication.

As there is nothing in the present law which adequately defines what constitutes ownership of oils which may underlie acreage classed as oil land, a test case will be carried to the Supreme Court. While only one major American company is involved in the present proceedings, which will come to a head some time in November, the fate of all of the American oil companies in Colombia (with the exception of those operating under grants, as outlined above) will hang on the decision.

With Colombia in the throes of a virtual economic panic, it is realized by the American oil companies that the present is not a favorable time to press for settlement of the oil law dispute, but political maneuvering has reached such a point that the oil companies find it impossible to remain passive any longer, and are determined now to press for a final solution.

Colombia's Misunderstanding

The task of the American companies in Colombia has been rendered unusually difficult because of the almost general lack of comprehension regarding world oil conditions on the part of most of the population of Colombia. It is evident that many of the Colombian plans for the regulation of the oil industry of the country have been based upon conditions prevailing some years ago when crude petroleum was an eagerly sought and relatively scarce commodity, commanding many times present prices. Recent developments in the industry, the opening of many new world pools, the imminence of a huge flood of crude from Iraq, overproduction of crude and refined products in Russia and Rumania, hydrogenation and improved refining processes resulting in greatly increased yields of gasoline and other products from smaller quantities of crude, apparently being discounted 100 per cent in Colombia. The major American companies interested in that country, however, are constantly faced with these new and complex developments, and there appears to be a growing question in the minds of some as to whether the game in Colombia is worth the ante in the form of maintenance charges which they are constantly being called upon for.

While nothing official has been forthcoming as to the attitude of the American companies in the event of continued hostility on the part of the Colombian legislature and courts, it is believed in well-informed circles here that the pending test case on subsoil rights will mark the turning point in operations in that country, and will be followed either by a general campaign of development and exploitation, in the event of a favorable decision, or a virtual abandonment of Colombian operations, with relinquishment of a large part of the lands now held under lease in that country and a writing off of Colombia from the active lists of these companies for some years to come.

OLSEN HEADS O. N. G.

Increasing business responsibilities have obliged E. C. Deal, president of the Oklahoma Natural Gas Corp., to retire from that post. E. A. Olsen, executive vice president of the company, succeeds him. Mr. Deal becomes chairman of the board of directors.

Oklahoma Output Drops 23,000 Barrels

Production in Past Week 63,000 Bbls. Under the Allowable. Withdrawals of Crude Oil From Storage Continue

By W. A. Spinney
Staff Correspondent, Oklahoma Fields

The daily average production of Oklahoma for the seven days ending October 24 was 63,000 bbls. a day under the 545,000-bbl. allowable. Oklahoma averaged approximately 482,000 bbls. a day for the seven days, which was a decline of approximately 23,000 bbls. a day from the previous week's gauges. Most of the State's decline was in the Oklahoma City Field. The production from the Oklahoma City Field increased Wednesday, October 21, the first day the allowable was 6 per cent of the revised potential as fixed by the commission. The total production of the field was 196,520 bbls. from 105 wells. Under the new orders this was the first day the field operated, with ratable takings. The new military order which was effective Tuesday provided that all companies take oil ratably from leases and prohibits daily overproduction from individual wells. The order which was an extension of the first 10-day order expiring on October 20, with the exception of increasing the daily allowable to 6 per cent of the revised potential, has virtually the same rules and regulations as issued October 9. The new order provides that each company must produce its wells ratably over the entire period instead of producing its entire allowable the first or second day of the period, which has been the practice in the past. This practice resulted in the large production the first day the field was opened after the military shutdown. The production on the first day was approximately 368,000 bbls. The cause of this large day's production was that several of the companies produced their entire allowable for the period in one day and then shut the wells in the balance of the period.

Potentials on new wells taken during the week, and not revised, include the following:

Company and well—	Bbls.
I.T.I.O., No. 1 Mt. Vernon	2,100
I.T.I.O., No. 2 Terrace Lawn	42,152
Mid-Texas Pet. Co., No. 1 Floral	10,056
Great Southern Oil Co., No. 1 Bucher	17,824
Phillips Pet. Co., No. 1 Dora	30,363
Slick Oil Co., No. 2 Classen-Edwards	34,126
Slick Oil Co., No. 3 Classen-Edwards	49,356
Slick Oil Co., No. 5 Classen-Edwards	7,761

Seminole Oil Shipments

Shipments from the Greater Seminole area were normal during the week ending October 21. Withdrawals from storage during the same seven days totaled 11,205 bbls. compared to 11,400 bbls. of the week before. The daily average pipe line shipments was 56,743 bbls., compared to 57,880 bbls. for the previous week. The shipments from the various pools were as follows: Seminole area, 40,700 bbls.; Konawa, 3,200 bbls.; St. Louis-Pearson area, 10,400 bbls., and the Asher area, 2,264 bbls.

During the same week the Empire Oil & Refining Co. withdrew from storage 288 bbls. daily from Section 14-8-6, Standish Pipe Line Co. withdrew 3,260 bbls. daily from 9-4 area, Pure Oil Co. withdrew approximately 5,000 bbls. daily from 28-9-6. Magnolia Petroleum Co. withdrew 1,210 bbls. daily for interstate shipment. Indian Territory Illuminating Oil Co. withdrew an average of 1,442 bbls. of oil daily from its tank at 22-8-6.

During the week there has been some oil going into storage in the Greater Seminole area. The Texas Company ran 540 bbls. of oil a day to storage into its Earlsboro farm in Section 8-9-5. Magnolia Petroleum Co. ran 1,210 bbls. daily of Burbank oil to its farm in Section 28-9-6.

Activity in Stephens County

Two locations in Stephens County are the only active developments in the southern part of the State in recent weeks. The activity was the result of the recent rains which were general over the State during the week, after a long drouth.

George Pace's No. 4 McMasters, NE cor. NW NW, Section 13-2s-8w, was rigging up rotary tools. H. J. Brown and K. D. Oil Co.'s No. 2 Hightower, SW cor. SE SE, Section 15-3s-5w, a new location, was spudding. It is located in the field southwest of Loco and on the lease where the same operators recently completed a small producer at 1,005 feet. W. H. Smith and others' No. 1 Ridgeway, NW cor. NE SE, Section 17-3s-5w, was rigging up. It is a wildcat test located about 2 miles south and 2 miles east of Loco. Work at this location has been tróleum Co.'s No. 1 Wilkerson, SE cor. NE SE, Section 8-1s-5w, a wildcat test delayed by recent rains. Murray Penear the Santa Fe Field, was drilling at 1,075 feet.

The leasing of acreage in the State continues but applies only to a few scattered counties. The oil companies are surrendering some leases and acreage in all parts of the State. The rentals on the majority of wildcat acreage are still being reduced as the date for payment approaches.

In the Greater Seminole area in Pontotoc County, Turman Oil Co. has surrendered leases on 37 tracts in Townships 3-6, 3-7, 3-5 and 2-7. J. A. Hull Co. has surrendered leases in blocks that are located in Sections 6 and 7-4-6 and in 1 and 12-4-5.

In Pottawatomie County, Carter Oil Co. has recently taken an extension for 5 years on its leases in the SW NW, Section 13-11-6, and SE NE, Section 14-11-6.

In Caddo County, Gypsy Oil Co., Burke-Greis Oil Co., and Iron Mountain Oil Co. have reduced rentals from $1 per acre to 50 cents per acre on scattered leases. In Grady County, C. Wright has leased the NW, Section 15-3-8w.

In Cleveland County, which is mostly wildcat territory the only production in the county being along the extreme northern boundary, the Carter Oil Co. has surrendered leases on the NE NE, Section 25-8-2w, N half NW, Section 19-8-1w.

In Kingfisher County, the Shell Petroleum Corp. has surrendered leases on the S half SW, Section 26-15-7w, N half NW, Section 35-15-7w. In Lincoln County, the Prairie Oil & Gas Co. has leased the SE, Section 19-14-2. R. L. Kemp has leased the SE SE, Section 26-17-6. The Magnolia Petroleum Co. has surrendered the SE, Section 1-15-2.

In Love County, C. Van Vleck has leased the E half NE NE and NE SE NE, Section 14-9s-2. Mid-Continent Petroleum Corp. has leased the SW SE and S half NW SE, Section 19-8s-2.

Scattered Lease Buying

Leases and small blocks are being assembled in scattered areas in the State. Stanolind Oil & Gas Co. has taken a small block in Noble County. Activity in Lincoln County continues in certain areas, and is believed to be due to recent geophysical surveys. Recent transactions include the following: Lincoln County, Twin State Oil Co. leased the NW, Section 14-12-2; the Gypsy Oil Co. leased the S half NW, Section 5-15-5, and E half SE, Section 17-15-4, N half NE, Section 17-15-4, the W half SE, Section 17-15-5; the Prairie Oil & Gas Co. leased the W half NE, Section 20-15-5, SE, Section 30-14-3, E half SE, Section 20-12-5, W half NE, Section 11-13-5.

The Stanolind Oil & Gas Co.'s block in Noble County includes W half SE and NW, Section 7-21-3, N half SW, Section 5-21-3, S half SW, Section 24-21-2, NW and NE, Section 5-21-3, NE and NW, Section 14-21-2, NE, Section 7-21-2. The Gypsy Oil Co. has leased the NW, Section 36-21-1, and SW, Section 30-21-1.

In Grady County, C. B. Banfill leased the SW and SW NE and N half N half SE, Section 4-7-7w, the SE, Section 36-10-8w, N half SW and W half SE, Section 26-6-8w, and SE NE, Section 4-7-7w.

Leases are being surrendered in three different blocks surrounding the Oklahoma City Field which were at one time considered promising for oil and gas. During the last two years several dry holes have been completed on or near these leases.

Northwest of the Oklahoma City Field the Pandem Oil Co. has surrendered some of its leases in the Schafer Addition in Section 17-12-4w. The acreage is located west of Bethany, where a deep dry hole was drilled. The company still has approximately 3,000 acres of leases in the vicinity, but whether or not it intends to surrender these leases could not be learned. The deep dry hole is located on the St. Joseph's Orphanage tract on the edge of the city limits of Bethany. It attracted considerable attention while drilling and was reported to have had several showings of oil and gas but none were commercial. The test is now shut down at a total depth of 6,700 feet.

Mid-Kansas Oil & Gas Co. has surrendered several tracts of acreage in its block east of the Oklahoma City Field around Nicoma Park. About 40 tracts were released, located in Sections 13, 17, 20, 24, 25, 26 and 36-11-2w, and in Sections 7, 8, 9, 16, 17, 19, 20, 21 and 31-12-1w, and in Section 6-11-1w. Some of these tracts are located close in to the discovery well of the area, which has been producing around 125 bbls. of oil a day for nearly two years. Three dry holes have been completed in the vicinity of the discovery well; two were direct offsets. The company originally had a block of approximately 10,600 acres. It is believed the company has surrendered approximately one-half of the acreage of the block to date.

North of the Oklahoma City Field and east of the state capitol building Cromwell-Franklin Oil Co. has surrendered leases on tracts in the E half SW, Section 31-13-2w, which is in the extreme northeast corner of the block where the discovery well in the county was drilled several years ago.

More Water Intrusion

In the Oklahoma City Field one of the companies, after a survey of water conditions, finds that the salt water encroachment is becoming more rapid and that producers will soon be forced to

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WILDCAT OPERATIONS IN OKLAHOMA

NORTHERN OKLAHOMA

Company, farm and location—	Remarks:
ALFALFA COUNTY	
Smith Brothers' No. 1 Forbes, SE cor. NW NW, Sec. 12-27-11w	S.D. 1,232 ft.
J. W. Bailey's No. 1 Acre, SW cor. NE Sec. 14-24-11w	S.D. 5,502 ft.
ATOKA COUNTY	
Campbell's No. 1 Baird, NW NE SW Sec. 31-1-13	Rig.
Edgerton Edwards' No. 2 Rowland, SE NE NW Sec. 6-1-15	Rig.
BECKHAM COUNTY	
Price-McFann's No. 1 Webster, C SW SW Sec. 34-8-26w	T.D. 2,344 ft; plugged back to 1,890-1,900 ft; 1,500,000 ft. gas.
Mid-Continent's No. 1 Schaff, C NE SW Sec. 22-11-22w	Waiting on cmt. to set 430 ft.
Mid-Texas Co.'s No. 1 Sidell, NE cor. SW SW Sec. 17-2-22w	S.D. 2,550 ft.
White et al's No. 1 Green, SW cor. Sec. 34-10-24w	S.D. 3,575 ft.
BLAINE COUNTY	
Washoma Oil Co. et al's No. 1 Phillips, C NW SW Sec. 13-19-10w	S.D. 5,115 ft.
CADDO COUNTY	
Abernathy & Brown's No. 2 Houston, Sec. 24-6-13w	S.D. 1,115 ft.
CHEROKEE COUNTY	
La Piere et al's No. 1 Woods, C SE SE Sec. 27-17-21	Drlg. 1,068 ft.
COAL COUNTY	
Radial Oil Co.'s No. 1 McCraw, NE NW Sec. 2-1s-8	Drlg. 920 ft.
McCraw Oil Co.'s No. 1 Ward, NE SE Sec. 35-1-8	Drlg. plug; showing 2,000,000 ft gas 1,765-1,846 ft; mudded off gas; S.D.
Whitney et al's No. 1 Miller, SE NE Sec. 10-2-8	S.D. 760 ft.
COMANCHE COUNTY	
G. W. Stogner's No. 1 Doebel, C SW SW Sec. 3-3-9w	S.D. 1,450 ft.
LE FLORE COUNTY	
H. E. Dowd et al's No. 1 Unknown, SE NE Sec. 17-3-22	Fishing 1,112 ft.
GARFIELD COUNTY	
E. L. Love et al's No. 1 White, SE cor. NW Sec. 9-24-6w	S.D. 5,850 ft.
Malarnee et al's No. 1 Phillips, NE SW SE Sec. 24-2-2w	S.D. 4,830 ft.
GREER COUNTY	
Dovell et al's No. 1 Capell, NW cor. Sec. 1-7-22w	5,000,000 ft. gas 1,455-65 ft; T.D. 1,760 ft.
French's No. 1 Murphy, SW NW Sec. 23-7-21w	S.D. 1,645 ft.
HARPER COUNTY	
Sinclair O. & G. Co.'s No. 1 Howell, C SW SW, Sec. 14-26-24w	20,000,000 ft. gas 5,350-5,400 ft; T.D. 8,539 ft; S.D; sprayed 50 bbls. gasoline.
HASKELL COUNTY	
Ault et al's No. Harrison, CWL SE NE, Sec. 14-9-19	S.D. 650 ft.
Ault et al's No. 1 Hall, NW SW SW, Sec. 14-9-19	S.D. 2,000 ft.
Ault et al's No. 1 Hall, SE NW, Sec. 25-19-9	S.D. 200 ft.
Holden's No. 1 Phillips, SE cor., Sec. 3-9-18e	S.D. 1,860 ft.
Marion Oil's No. 1 Sanders, NW NE NW, Sec. 10-9-18e	S.D. 2,387 ft.
KAY COUNTY	
Lewis et al's No. 1 Harris, SE NW, Sec. 14-25-1	Location.
Mummert Drlg. Co. et al's No. 1 Cormick, C NW SE, Sec. 9-27-2	S.D. 3,693 ft.
Blackwell Oil Co.'s No. 1 Harshman, Sec. 5-26-1w	Rig on ground.
KIOWA COUNTY	
Christian's No. 1 Jones, NE SE, Sec. 8-7-18w	S.D. 820 ft.
LATIMER COUNTY	
P. English's No. 1 Unknown, NW SE, Sec. 16-6-19	S.D. 1,542 ft.

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Wildcat Producer on Ellsworth Arch

Barton County Test Filled Up 2,000 Feet in One Hour From Silicious Lime. New Potentials in Ritz-Canton

By W. A. Spinney
Staff Correspondent, Kansas Fields

Another important wildcat well found oil in the Silicious lime on what is believed to be the Ellsworth arch, in the southeastern part of Barton County, Kansas. Hilligoss and others' No. 1 Isern, SW cor. SE NE, Section 12-20-11w, found the oil pay at 3,313-14 feet. Oil rose 2,000 feet the first hour. The owners expect to drill the well a few feet deeper before making a production test. The test was started about a year ago by J. McCole and others, but drilling operations were suspended at approximately 1,700 feet, at which depth Hilligoss and others took the test over and resumed operations about two months ago. Rapid progress was made on the drilling of the well and in about three weeks it reached a total depth of 3,280 feet where it was shut down. Drilling was resumed during the last week and continued to the pay formation. It is the second wildcat operation in the district in which Hilligoss has been interested that resulted in a producing well. About two years ago Hilligoss & Steinbuechel drilled the discovery well in the Schurr Pool, in Rice County, and later selling their interests to Slick, Pryor and Lockhart. No. 1 Isern in Section 12-20-11w is located about 3½ miles northwest of the Schurr Pool in Rice County.

Oil production in the State during the week ending October 24 shows an increase of approximately 200 bbls. a day over the previous week. The daily average production was approximately 101,870 bbls.

Commission's New Orders

The Kansas Public Service Commission issued orders Thursday, October 22, ordering new potentials of the chat wells in the Ritz-Canton Pool beginning November 1. The potentials of the Viola lime wells in the same pool will begin December 1. The oil advisory committee and the field umpire, L. R. Pickrell, are to consider methods for taking potentials on the chat wells. The commission decided the gauges were necessary in order to reach an equitable basis of the production in the field.

Due to numerous objections from producers in the Ritz-Canton area regarding the method of determining the potential of the chat area, the advisory committee of the Public Service Commission is withholding its recommendations to the committee as to method until every producer has an opportunity to consider the matter. At the suggestion of the advisory committee, the operators committee has called a meeting of all producers for October 28 in Wichita. It is expected that some satisfactory plan can be worked out that will eliminate inequities now existing and which will be in accord with the wishes of the commission. It is expected that after the meeting the commission will issue an order setting forth the method of making the tests.

During the last several months the potential of the chat wells in the Ritz-Canton Field has been decided by deducting a percentage production from the previous month's gauges by means of a decline curve. Some of the combination gas and oil wells in the field have been allowed to produce 50 bbls. of oil a day, besides their gas production. The last potential gauge taken in the field showed a total of 85,388 bbls., October 1, from both the chat and the Viola lime wells.

Postpone Pipe Line

The Globe Oil & Refining Co., which operates a refinery at Blackwell, Okla., announced it had abandoned plans to construct a 100-mile pipe line from the Ritz-Canton Field in McPherson County, Kansas, to its refinery at Blackwell at this time. The company officials stated that the line may be built later.

Approximately $15,000 has been spent in making the preliminary survey for the line. The company's decision followed a conference with the Kansas Public Service Commission which advised the Globe Oil & Refining Co. that it would be allowed to ship only a small amount of crude oil through the line because of the strict proration program in the State.

The Globe Oil & Refining Co. expected to ship their own crude oil since the Lario Oil & Gas Co., the company's producing subsidiary, has the largest potential in the Ritz-Canton Field. The Lario Oil & Gas Co. has 20 producing wells in the field with a potential production of approximately 20,000 bbls. a day. The Globe intended to ship approximately 20,000 bbls. a day if permitted.

Part of the time the Globe Oil & Refining Co. has been shipping around 3,000 bbls. in tank cars a day from the Ritz-Canton area to the refinery at Blackwell, but since the Oklahoma City Field has been opened and producing, the company is now obtaining its crude oil supply from that field. The crude oil reaches Blackwell through the Continental Pipe Line Co.'s lines and Globe Oil & Refining Co. is exchanging oil with the Phillips Petroleum Co. The Phillips Petroleum Co. takes the Globe Oil & Refining Co.'s oil in the Ritz-Canton area and ships it to the Phillips Petroleum Co.'s plant at Kansas City.

Pipe Line Near Completion

Phillips Petroleum Co.'s new 6-inch pipe line from the Thrall station in Greenwood County to the Ritz-Canton Pool in McPherson County is expected to be completed this week. It will increase the outlet of the field approximately 5,000 bbls. a day. Other pipe line companies serving the area include the Skelly Pipe Line Co., Shell Pipe Line Co., Texas-Empire Pipe Line Co., White Eagle Pipe Line Co. and the Prairie Pipe Line Co. The total nominations of all the pipe line companies on October 1 was 12,500 bbls. a day.

Abandoning Loading Racks

The Stanolind Crude Oil Purchasing Co. is abandoning several of its loading racks in the State and is changing its connections to handle its purchases of crude through connecting pipe lines. In the Raymond area the Stanolind Crude Oil Purchasing Co. is shipping its oil out through the Prairie Pipe Line Co.'s lines by the way of the Voshell Field and pumping station. The Prairie Pipe Line Co.'s pipe line runs through the McPherson Field in Township 18-2w, and the oil from this field, which has been handled by the Stanolind Crude Oil Purchasing Co. through a loading rack, will now be diverted to the Prairie Pipe Line Co. The Stanolind Crude Oil Purchasing Co. is abandoning its Hilton loading rack, where it formerly handled this oil. The Stanolind Crude Oil Purchasing Co. is also abandoning its loading rack in the Ritz-Canton Pool, and the Prairie Pipe Line Co. is preparing to handle this oil. The Prairie Pipe Line Co. will carry the oil to its station at Eureka, in Greenwood County, where it makes delivery to the Stanolind Pipe Line Co.

F. Whan and others have taken over the wildcat test which was started by L. Gray and others in the NW cor. SW, Section 7-19-2w, 4 miles north of McPherson. The test was shut down at approximately 100 feet about three months ago.

Farmers Complain

A complaint has been filed with the Kansas Public Service Commission stating that many fresh water wells on farms in the vicinity of the Greenwich oil pool, northeast of Wichita, in Sedgwick County, have been ruined by salt water. A hearing on the complaint will be heard in Wichita on October 28, following the hearing of the commission's action on whether the salt water is entering the wells from the salt water reservoir at a depth of 2,200 feet into which the companies are pumping it or from improperly plugged dry holes is one of the questions the commission will determine.

The Continental Oil Co.'s No. 1 Nagel, SE cor. NE NW, Section 19-27-2, in the Eastborough Pool, in Sedgwick County, failed to extend the deep sand production in that area and is being plugged back to the chat formation from which depth it was producing before it was decided to drill the test deeper.

Derby Oil Co.'s No. 5 Eastborough, NE cor. SW NE, Section 19-27-2, Sedgwick County, has temporarily suspended fishing for tools. The company encountered difficulties soon after starting to drill the well deeper. It was producing from the chat formation and the north offset found production about 400 feet deeper, and the company started to deepen it to the same horizon. It may be necessary to abandon it later.

In an attempt to extend the production in the Patterson Pool, in eastern Greenwood County, A. Marhus and others' No. 1 Morse, SE cor. SW, Section 5-24-12, found the Bartlesville sand dry at 1,665-85 feet and is shut down at 1,795 feet. The test is located about a half mile south and east of the other production in the field, where the Tidal Oil Co. has several wells making around 200 bbls. a day from the Bartlesville sand. The test indicates that the territory to the southeast is not productive.

Activity in Haskell County

Since the discovery of gas in Haskell County, more than 25 miles northeast of the Hugoton gas field in Stevens County, the blocking of acreage has become active. Many express the opinion that the gas reserves in the southwestern part of Kansas are greater than any other in the country. The well that extended the gas area in that part of the State was the Trees Oil Co. and others' No. 1 Warner, C SE, Section 29-30-34w, which was completed for 14,000,000 feet of gas a day. It was one of the largest gas wells ever found in the area and indicates that a large productive gas field may exist in Haskell County, as well as in Stevens, Morton and Grant Counties.

The Decker gas area and the gas production on the northeast edge of the Ritz-Canton area in McPherson County has the largest gas area in the State, surpassing the Hugoton gas field. The McPherson County area has an estimated open flow of 1,300,000,000 feet of gas, compared to approximately 700,000,000 feet in the Hugoton gas field.

Coffey County

Aikman & Baker's No. 1 Povemire, SW cor. NW, Section 14-22-13, is spudding.

Cowley County

Lewis Production Co. is building the rig for No. 1 Penringer, SW cor. NE NW, Section 20-31-6. Whitter and others' No. 1 Cassoday, NE cor. SW, Section 19-34-3, is spudding. Lehman and others' No. 1 Page, NW cor. SW SE, Section 36-32-4, is dry and abandoned at 1,498 feet.

Ellsworth County

M. R. Buck and others made location for No. 1 F. Jirik, SE cor., Section 10-16-10w.

Harper County

Beeler and others' No. 1 Bear, C NE, Section 21-31-6w, is dry and abandoned at 1,830 feet.

McPherson County

Blankenship and others made location

(Continued on Page 80)

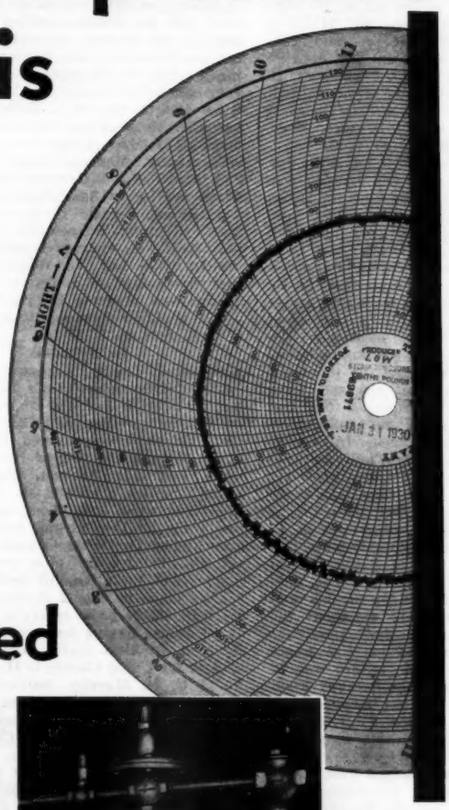
WILDCAT OPERATIONS IN KANSAS

(Descriptions [illegible]ked otherwise)

Company, farm and location—	Remarks:
BARTON COUNTY	
Syndicate Oil Co.'s No. 1 Boerts, NW SE SE, Sec. 13-18-12w	S.D. 2,440 ft.
Skelton Oil Co.'s No. 1 Ott, C SE SE, Sec. 16-19-14w	Drlg. 2,975 ft.
McCool et al's No. 1 Tsern, NW SE NE, Sec. 12-20-11w	S.D. 3,282 ft.
CHASE COUNTY	
Borden et al's No. 1 Atkinson, NW SE, Sec. 13-18-7	Rig on ground.
CLAY COUNTY	
Crystal Oil et al's No. 1 Tivier, SW cor., Sec. 19-8-2	S.D. 2,700 ft.
COFFEY COUNTY	
Heyburg's No. 1 Kroft, SE SW SE, Sec. 30-22-14	S.D. 1,565 ft.
COWLEY COUNTY	
Slocum et al's No. 1 Union National Bank, C SW SW, Sec. 16-35-4	Drlg. 1,600 ft.
DICKINSON COUNTY	
Severs et al's No. 1 Lavengood, NE SW, Sec. 13-13-2	S.D. 4,170 ft.
ELLIS COUNTY	
Gypsy Oil Co.'s No. 1 Welland, SE cor., Sec. 36-12-16w	3,051-59 ft.; swbd. 247 bbls.; completed; T.D. 3,073 ft.
ELLSWORTH COUNTY	
Keyes Bros.' No. 1 Gregory, SW cor., Sec. 23-16-9w	Drlg. 3,200 ft.
Alyward et al's No. 1 Stratman, SE NW SE, Sec. 1-17-10w	Silicious 3,255-71 ft.; 117 bbls. 2 hrs.; shut in; estimated 2,000 bbls.; no pipe line connections.
Aladdin Pet.'s No. 1 Stoddenberg, C SW, Sec. 22-16-10w	Silicious lime 3,332-47 ft; estimated 1,500 bbls. a day; shut in.
FINNEY COUNTY	
National Ref. Co.'s No. 1 Wells, C SW, Sec. 13-23-30w	Drlg. 1,470 ft.
FORD COUNTY	
Carter Oil Co.'s No. 1 Everett, C NE, Sec. 22-29-21w	Fishing 6,088 ft.
GRAHAM COUNTY	
Schleimeyer et al's No. 1 Clark, SW NE NE, Sec. 11-9-25w	S.D. 4,648 ft.
HARVEY COUNTY	
Liggett et al's No. 1 Davis, SW SE NE, Sec. 7-24-1	S.D. 1,505 ft.
J. P. Flannigan's No. 1 Sheridan, C SW, Sec. 32-22-1	Drlg. 3,610 ft.
KINGMAN COUNTY	
Skelly Oil Co.'s No. 1 Miles, NE cor., Sec. 30-27-10w	1,635-40 ft. 2,000,000 ft. gas; at 2,005-20 ft., 6,000,000 ft. gas; at 2,133-42 ft., 3,000,000 ft. gas; showing oil 3,385 ft; T.D. 3,441 ft; S.D.; estimated at 600 bbls. a day.
Panhandle Drlg. Co.'s No. 1 Wetherall, C SE NW SW, Sec. 20-28-10w	Rig.
MORTON COUNTY	
Hydraulic Oil Co.'s No. 1 State Land, NW SE, Sec. 22-34-43w	T.D. 3,640 ft; temp. abd.

(Continued on Page 68)

A constant reduced pressure like this



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Fluctuation from 4.7 lbs. to 5.5 lbs.

Chart graduated in tenths pounds

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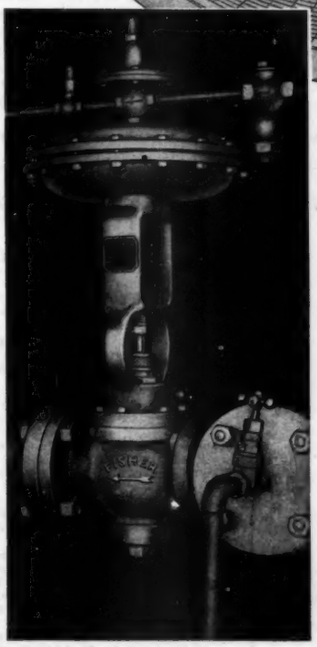

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New Producing Spot in Sabine Parish

Langbridge Well 5½ Miles From Other Production. Test in Clarke County, Mississippi, Ready for Test. New Gas Wells

By J. R. Crumpton
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., Oct. 26.—The prediction in these columns two months ago that the Langbridge Oil Co.'s No. 1 Stephens, Section 17-9-11, would open a new producing dome in northern Sabine Parish has been verified by its completion as an oil well during the week. Although not a gusher, it is flowing by heads 50 bbls. daily of 39 gravity pipe line oil through 2-inch tubing. The total depth of the hole is 3,626 feet, but production is coming from 3 feet of sand at 3,366-69 feet, 6⅝-inch casing having been set at 3,350 feet. The new producing wildcat is 5½ miles southeast of the Pleasant Hill Field and 10 miles north of the Zwolle chalk rock field. Production is coming from practically the same horizon as in Pleasant Hill, but there is a wide variance in the analysis and color of the crude from the new well in comparison with both Pleasant Hill and Zwolle. The Pleasant Hill oil has a higher gravity, about 40 degrees, but has a high kerosene content and a low gasoline content, while a laboratory test on crude from the new well showed a gasoline content of about 24 per cent and also a good percentage of kerosene and gas oils.

The paleontological reports from this test in its early stages indicated that it had a good chance of being a producer. The reports gave the top of the Saratoga chalk at 1,832 feet and the base at 2,164 feet, showing a total thickness of only 332 feet, whereas in the Pleasant Hill Field, the average thickness of the chalk is 488 feet. Several wildcats drilled to the south and southwest of the Langbridge test showed a still further thickening of this formation. Although still listed on reports as the Langbridge Oil Co.'s No. 1 Stephens, the well was taken over after the first drill stem test by the Pugh-Hickman Drilling Co., Inc., and finished by these operators. The latter acquired the well, the 40-acre tract on which it is located, and several hundred acres in the vicinity for completing it. Mr. Pugh, before entering business for himself, was formerly production superintendent for one of the major oil companies in Shreveport, and Mr. Hickman is an experienced operator and contractor for many years in this district. The Langbridge Oil Co., of which H. B. Langford of Shreveport is president, still owns the greater part of the original block consisting of several thousand acres.

Jackson County Gas Wells

The only successful completion in any of the proven areas in this division was reported from the Jackson Field of Hinds County, Mississippi, which has consistently furnished one good gas well each week for several weeks. The Love Petroleum Co.'s No. 1 Federal Compress & Warehouse Co., in Section 15-5n-1e, was brought in with an estimated initial flow of 25,000,000 feet of dry gas from 2,446 feet. The well is located in the northwest quarter of the section, and near the southwestern boundary of the field. Not a completion was reported from North Louisiana or Arkansas, but two of the border East Texas counties reported one dry hole each. In Shelby County, Bradley & Kadane's No. 1 Ashberry, G. W. Mitchell Survey, after being shut down for some time, was abandoned as dry at 3,280 feet. This test is located about 7 miles southwest of E. L. Chapman's No. 1 Pickering Lumber Co., which blew in as a wild gasser several months ago from 3,864 feet. The only show reported along the log of this well came from broken chalk at about the 3,000-foot level, and a drill stem test from 3,041-53 feet developed five joints of salt water. The other failure was in the semiproven area of the Bethany Field of Panola County, the Southwestern Oil & Gas Co.'s No. 1 Vinson, C. T. Anderson Survey, encountered salt water and was abandoned at 2,650 feet.

Important Mississippi Test

In Clarke County, Mississippi, the Gulf Refining Co. has set 6⅝-inch casing at 3,675 feet in its No. 1-A Long Bell Lumber Co., Section 10-2n-1e, not far from the Alabama line, and will drill plug within a few days for a test. A good looking oil-bearing sand was topped in this wildcat at 3,692 feet and penetrated 8 feet to the bottom of the hole at 3,700 feet. The results of testing this sand will be closely watched by operators in this district. Several other wildcats in Mississippi are reaching interesting depths. In Humphrey County, the Danciger Oil Refining Co. is drilling at 2,296 feet on its No. 1 Bellgrade Lumber Co., in Section 29-14n-4w. In the original Mississippi gas area discovered near Amory, Monroe County, McAlpine and others' No. 1 Cowart, Section 2-12-19, is drilling at 3,535 feet. The United Gas Public Service Co.'s wildcat test, No. 1 Tchula Co-Operative Store, Section 35-15n-3e, Warren County, is drilling at 2,593 feet. In Winston County, the Mississippi Drilling Co., although making slow progress, has reached a total depth of 4,010 feet on its No. 1 Scarbrough, Section 15-13-14.

In Arkansas

In Union County, Arkansas, the Drillers Oil & Development Co.'s No. 1 Pickering, in Section 1-17-16, is arranging to set 6⅝-inch casing at 2,128 feet for a test. The drill encountered 1½ feet of cap rock and 4½ feet of likely looking sand from 3,128-34 feet. This test is about 3 miles northeast of the Lisbon producing area and about midway between the El Dorado and lower Smackover Fields. In Dallas County, the Zepp Oil Co. is drilling plug from 6-inch casing, set at the base of chalk rock, at 2,620 feet in its No. 2 Hillman, Section 20-10-13. There is no report of any show of oil or gas having been encountered in the test at this depth. Another semi-wildcat for Union County is H. H. Helms' No. 1 C. H. Murphy, Section 31-16-14. This test is a few miles north of the El Dorado east field on an assembled block of 1,000 acres. In Prairie County, the Powell Creek Oil & Gas Co. is rigging up to drill No. 1 Kloss in Section 3-4n-6w. The Lion Oil Refining Co.'s No. 9-A Hayes, Section 4-16-15, a deep test in the Smackover Field, cored salt rock from 5,974 to 5,980 feet and again at 6,031-50 feet. The total depth of the hole at this writing is 6,055 feet, with the last 5 feet penetrated being broken lime and salt. Joe Modisett and others have spudded in on their No. 1 Webb, Section 6-18-13, about 3 miles west of the new northern extension of the Urbana Field.

Daily Average Runs

There was an increase of only 5 bbls. per day in the daily average runs from the fields of North Louisiana and Arkansas during the week. Daily average runs for the several pools were:

NORTH LOUISIANA

	Bbls.
Caddo, light	6,115
Caddo, heavy	1,530
Cotton Valley	360
DeSoto and Red River	2,185
Elm Grove	390
Haynesville	4,670
Holly	330
Homer	2,800
Pleasant Hill	345
Sarepta-Carterville	870
Urania	3,600
Zwolle	6,255
Total North Louisiana	29,510
Total previous week	29,505
Increase	5

ARKANSAS

Champagnolle	2,000
El Dorado	3,030
Lisbon	570
Nevada	1,125
Smackover, light	3,135
Smackover, heavy	26,510
Stephens	710
Urbana	840
Total Arkansas	37,970
Total previous week	37,970
Increase	0
Total both states	67,480
Total previous week	67,475
Increase	5

Texas Border Counties

Drilling activities in the wildcat border counties of East Texas have slowed down to a great degree. Of 32 wildcats on which drilling was started in the counties of Bowie, Cass, Harrison, Marion,

(Continued on Page 65)

WILDCAT OPERATIONS IN LOUISIANA-ARKANSAS

(Rotary operations unless otherwise designated)

NORTH LOUISIANA

BOSSIER PARISH

Company, farm and location—	Remarks:
Andrews & Davlin's No. 1 Nattin, 100 ft. N, 250 ft. W, C, Sec. 15-22-14	S.D. 2,890 ft.
Dr. W. N. Hankin's No. 1 Newell, 300 ft. S and W, NE cor., Sec. 13-19-11	Drlg. 1,531 ft.
D. L. Perkins' No. 1 Ardis & Co., 1,127 ft. N, 198 ft. E, SW cor., Sec. 13-15-11	S.D. 1,004 ft.

CALDWELL PARISH

Carter Bell's No. 1 Taylor, 150 ft. S, 150 ft. E, NW cor. NE SE, Sec. 17-14-4	Set 12-in. csg. 110 ft.
Hudson et al's No. 1 Burton, Sec. 35-12-2e	S.D. 2,950 ft.

CATAHOULA PARISH

National Drlg. Co.'s No. 1 Marsh McMiller, 70 ft. N, 100 ft. W, C, Sec. 26-9-6	T.A. 3,097 ft.

CLAIBORNE—SUGAR CREEK

United Gas Public Service Co.'s No. 1 Treadwell & Hawk, 1,470 ft. S, 1,395 ft. E, NW cor., Sec. 6-19-5w.	Completed 29,279,000 ft. gas, at 4,380 ft.

DE SOTO PARISH

Keatchie O. & G. Co.'s No. 1 Hallie Smith (was H. E. Weichert's), NE SE, Sec. 31-14-15	S.D. 2,350 ft.
Ben Merritt, tr.'s No. 1 Walluma, NE cor. SW SW, Sec. 19-12-12	Tested dry 2,715 ft; S.D. 2,820 ft.
E. T. Oakes' No. 1 R. H. Bryant et al, 200 ft. N and W, SE cor. NE NW, Sec. 30-13-15	S.D. for fuel 3,001 ft.
Reilitt Oil Co.'s No. 1 Ganno hrs., 300 ft. S and E, NW cor. NW NE, Sec. 12-11-16	Tested dry 1,965 ft; W.O.
Walters-Nicholson, tr.'s No. 1 Jim Guy, Sec. 3-11-13	S.D. 1,266 ft.

LA SALLE PARISH

Gulf Ref. Co.'s No. 1 Tremont Lbr. Co., 668 ft. N, 632 ft. E, SW cor., Sec. 10-9n-2e	Drlg. 4,134 ft.

NATCHITOCHES PARISH

Cooper et al's No. 2-A Cooper, C SE SE, Sec. 32-11-10	S.D. 1,518 ft.
Mid-West Prod. Co., Inc.'s No. 1 H. Brown, Sec. 34-11-10, 200 ft. W, 230 ft. S, NE cor. SE	Derrick.
C. M. Talley et al's No. 1 C. M. Talley, 1,980 ft. W, 660 ft. S, NE cor. SE, Sec. 29-11-10	Tested dry; S.D. 1,380 ft.

(Continued on Page 68)

LOUISIANA-ARKANSAS PROVEN AREAS

NORTH LOUISIANA

CADDO PARISH—PINE ISLAND

Company, farm and location—	Remarks:
Shreveport Oil Corp.'s No. 2-B Muslow, 1,000 ft. S, 300 ft. E, NW cor., Sec. 32-21-15	S.D. 2,135 ft.
Simplex Oil Co.'s No. 1 Youree-Glassell, 500 ft. N and E, C, Sec. 13-20-15	Tested S.W; S.O. 2,275 ft.

CADDO PARISH—RHODESSA AREA

United Gas Public Service Co.'s No. 1 H. J. Bussa, Sec. 33-23-16, 990 ft. W and 660 ft. S of NE cor.	Drlg. hard lime 3,743 ft.

MOREHOUSE PARISH

Bahan & Bahan's No. 4 Feazel, 900 ft. W, 300 ft. S, NE cor., Sec. 2-20-4	Location.

OUACHITA PARISH

Carbon Consolidated's No. 7 Guthrie, Sec. 50-20n-4e, 5,263 ft. N and 7,475 ft. W of cors. of Secs. 25, 26 and 49, in Sec. 50	Location.

RICHLAND PARISH

Pelican Nat. Gas Co.'s No. 1 Alexander, Sec. 4-16-6, 660 ft. N and W, SE cor. Sec.	Began Oct. 18; set 12-in. 178 ft.
Southern Carbon Co.'s No. 1 Pollard, Sec. 26-16-5e, 2,710 ft. S and 562 ft. W of NE cor.	Drlg. 2,050 ft.
Southern Carbon Co.'s No. 6 Rosengraut & Ducomb, 2,640 ft. E, 1,980 ft. N, SW cor., Sec. 19-17-6	Location.
Southern Carbon Co.'s No. 7 Rosengraut & Ducomb, Sec. 24-17-5e, 696 ft. W and 660 ft. S, NE cor.	Set 6-in. 2,285 ft.
Southern Carbon Co.'s No. 8 Rosengraut & Ducomb, 2,546 ft. E, 660 ft. N, SW cor., Sec. 18-17-6e	Location.
United Gas Public Service Co.'s No. 5 Earle, Sec. 25-17-5e, 1,980 ft. E, 1,320 ft. S, NW cor.	Drlg. 2,015 ft.
United Gas Public Service Co.'s No. 1 Faust, Sec. 13-17-5e, 320 ft. W, 600 ft. N, SE cor.	Set. 6-in. 2,300 ft.

SABINE PARISH—ZWOLLE

O. J. Baird's No. 1 Duggan, Sec. 14-7-11, 328 ft. S, 648 ft. E, from center of Sec.	Rigging up.
Roy Baker's No. 1 Sabine Lbr. Co., Sec. 1-7-12	W.O.S.R. 2,548 ft.
W. M. Coates' No. 1 Bowman-Hicks, 330 ft. S and W, of C, Sec. 2-7-12	W.O.S.R. 2,441 ft.
W. M. Coates' No. 1-B Sabine Lbr. Co., 150 ft. N and E, SW cor. NW NW, Sec. 1-7-12	W.O.S.R. 2,306 ft.

(Continued on Page 68)

Iowa Dome Test Proves Good Producer

Seventh New Field Opened on Gulf Coast This Year. Oil of High Gravity. Manvel Discovery, Brazoria County, to Be Deepened

By Nell Williams
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., Oct. 26.—Completion of Vacuum Oil Co.'s No. 1 Waite, first test drilled on the Iowa geophysical prospect on the Calcasieu-Jefferson Davis Parish line, Louisiana, as a good producer marked the most important development on the Gulf Coast the past week. The well definitely proves that area as the seventh new field opened on the coast this year and the second within a period of two weeks. The other field opened this month was at Cameron Meadows in southern Cameron Parish and which also was brought in by Vacuum Oil Co.

The Iowa discovery well is in sand at 6,958-71 feet. Seven-inch casing was successfully landed at 6,932 feet early last week and after drilling plug and setting joint of 5-inch screen in sand with 13 feet of 5-inch liner and 2½-inch tubing to the top of the well came in Thursday night after washing a short time. Placed on a three-eighths-inch choke, it flowed initially at the rate of 1,000 bbls. daily with 650 pounds pressure on the tubing and 750 pounds on the casing. On a later three and a half hour actual gauge with two three-eighths-inch chokes on the tubing and a half-inch choke on the casing it flowed at the rate of 3,150 bbls. daily, 1,100 pounds pressure. At latest report it was making 65 bbls. hourly through two three-eighths-inch chokes with 1,400 pounds pressure on the casing and 1,200 pounds through the tubing.

The new oil is high gravity, testing 42 degrees (corrected for temperature). Temperature of the well is 80°. At present there are only four 1,000-bbl. storage tanks at the well. However, Iowa is less than 20 miles from Vacuum's Lockport Field at Lake Charles, where the company has terminal facilities. It is not likely a pipe line will be laid soon, but direct railroad connections are available.

Location of the Waite producer is 225 feet out of the SE cor. of Section 12-9s-7w and also of the Vacuum lease. Completion of the well calls for the immediate drilling of two and possibly a third offset by Shell Petroleum Corp., which holds the acreage directly east, south and diagonally southeast of Vacuum's Waite tract. A property line division may force the diagonal offset as well as the east and south offsets. The east line of the Waite tract also is the parish line so that Shell's east offset will be in Jefferson Davis Parish. The two companies control the bulk of the prospective acreage, but Gulf Refining Co. and several independents own several small tracts farther to the east.

Second Deep Sand

The present deep sand is the second found by this well, which was completed the first time at 5,001-8 feet, flowing 250 bbls. daily with 4,000,000 feet of gas through a three-eighths-inch choke. The well, however, soon began making water and was shut in pending installation of a small treating plant. When opened again it flowed only salt water. Gravity of the oil in that sand was 29.9 degrees, as compared with the 42 degrees in the present sand. The 5,000-foot sand caused considerable trouble in an attempt last June to test the present sand. At that time the hole had been drilled to 6,979 feet and after casing and screen had been set, but before the well could be brought in, it blew out between the 7-inch and the 9⅝-inch casing strings from the shallower sand. The blowout damaged the casing to such an extent that the hole had to be sidetracked and drilled back down.

Cameron Meadows Well

After being shut in since its completion two weeks ago, Vacuum Oil Co.'s No. 1 Cameron Meadows, Section 21-14s-9w, Cameron Parish, first commercial well on the Cameron Meadows geophysical prospect, was opened again at intervals late in the week and in a period of two hours on a half-inch choke flowed at the rate of 2,400 bbls., 675 pounds pressure. Again opened at intervals on a three-eighths-inch choke, it flowed 682 bbls., 950 pounds on the casing and 750 pounds through drill stem. The well was completed flowing 1,000 bbls. daily through a three-eighths-inch choke. It is in sand at a total depth of 5,270 feet. This field is owned entirely by Vacuum Oil Co.

Deepen Manvel Discovery

The Texas Company late in the week was trying to kill its No. 1 Belcher, discovery well of the new Manvel Field, Brazoria County, preparatory to deepening it. The present depth is 5,454 feet, where it was completed early in the month flowing 60 bbls. an hour. However, since then the pressure of the well has increased from around 100 pounds to above 2,000 pounds and has cut oil production to below 150 bbls. daily, and unless pinched to a very small choke the well makes considerable sand with the danger of cutting out connections.

This is the second time this well has been killed. It originally was completed early in September at a total depth of 5,481 feet. At that time it flowed initially at the rate of 2,000 bbls. daily and for a couple of weeks it flowed steadily around 1,600 bbls. daily. It then dropped off rapidly and when making very little oil it was killed. Going into the hole, the operators found the screen 20 feet off bottom so after deepening the hole 3 feet screen was reset and the well brought back in.

Bayou Choctaw Dome

Standard Oil Co. (Louisiana) is to make a pumper out of its No. 1 Myrtle Grove-Wilbert, Bayou Choctaw Dome, Iberville Parish, Louisiana. Plugged back from the salt, topped at 2,566 feet, to a sand at 2,410-73 feet, the hole is standing 1,400 feet in fluid, 1,000 feet of which is oil. Bottom of the plugged hole is 2,535 feet. This well is 250 feet west of No. 1 Gay, discovery well, which was completed last June estimated as good for 3,000 bbls. daily from sand at 4,353 feet. Although only 250 feet from the Myrtle Grove-Wilbert pumper, the discovery well missed the salt. Two additional locations for this dome were made two weeks ago.

Lockwood (Thompson), Fort Bend County, another of this year's new fields, continues a center of interest in view of efforts of the operators to prove up deep sand possibilities. Cullen & West and Gulf Production Co.'s No. 2-A Lockwood & Sharp, north end of the field, which was completed 10 days ago flowing 8 bbls. an hour, 20 to 70 pounds pressure, through a five-eighths inch choke, from sand at a total depth of 5,103 feet, has been killed preparatory to deepening. These operators' No. 2 George, located in the south part of the field, also has been shut in. It blew in early last week while coming out of the hole with a core at 5,201 feet, and flowed 27 bbls. an hour, 800 pounds pressure, through two 1-inch chokes. No screen is in the hole. These operators' No. 3-A Lockwood & Sharp, 600 feet east of No. 2-A, tested salt water at a total depth of 3,513 feet and is to be deepened. Two sands were tested, 24 feet of screen being set at 3,267 feet and 12 feet at 3,513 feet. This well previously had tested dry gas in sand at 3,107-39 feet. Nos. 2-A and 3-A are 800 feet to the northward from No. 1-A Lockwood & Sharp, the discovery well, which flowed between 300 and 400 bbls. daily from sand at a total depth of 3,087 feet. So far the discovery well is the only one which has made a producer in that horizon. Three additional producers have been completed at Lockwood but these were approximately a half mile to the southwest of the discovery well and are in a sand at 3,500 feet. The George well, mentioned above, the fourth test in that area, failed to make a producer in that horizon and was deepened to its present depth.

East Hackberry

Two additional wells have been completed in the new north extension pool on the East Hackberry Dome, Cameron Parish, Louisiana. These are Yount Lee Oil Co.'s No. 43 State, which flowed 500 bbls. daily through a half-inch choke, from sand at 3,003 feet, and Calcasieu Oil Co.'s No. 3 Landry, a small pumper at 2,658 feet. The pool was opened several months ago by J. G. Sutton's No. 1 Irwin, a 1,200-bbl. well at 2,989 feet.

Refugio Area

In the northeast extension pool of the Refugio area, United Production Corp. is preparing to make a test of a sand at 5,186-94 feet found in its No. 2-A W. J. Fox, William Hews and L. Brown Survey. This test is 1,600 feet northeast of the nearest producer, No. 1-A W. J. Fox, the discovery well. Two other wells, both to the south of the discovery well, have been completed in that pool, which is more than 3½ miles northeast of the main Refugio Field. These two wells and also the discovery well are in a 5,800-5,900-foot horizon, the sand found in No. 2-A W. F. Fox having been passed up by the other wells.

Walker County

Location for an interesting wildcat in northern Walker County was made the past week by George C. Meredith. The location is in the Jose Ortega Survey on the Thompson Lumber Co. tract. This is a part of a block obtained sometime ago by Shell Petroleum Corp., which retains the adjoining acreage and is assisting in the present test. Magnolia Petroleum Co. and Pure Oil Co. also have acreage in that area.

GULF COAST FIELDS AND WILDCATS

Week Ended October 24

All Rotary

Company, farm and location—	Remarks:
BARBERS HILL—CHAMBERS COUNTY	
Mills Bennett Production Co.'s No. 5 Wilburn, Henry Griffith League, 350 ft. W of No. 4 in C of lease	Coring sand showing oil 4,880 ft.
Mills Bennett Production Co.'s No. 1 Gulf fee, Henry Griffith League, 50 ft. out of NE cor., Strip 15	Cem. 10¾-in. casing 1,464 ft.
Mills Bennett Prod. Co.'s No. 3 Gulf Fisher (W.O.), Wm. Bloodgood Sur., 600 ft. from S line and 50 ft. from W line of 25-ac. tr.	Coring sandy shale 4,891 ft.
J. S. Abercrombie, trustee's No. 8-H Kirby, Henry Griffith League, 333 ft. W of No. 6-H Kirby and 70 ft. N of S line	Total depth 4,375 ft.; sidetracking shale and lime 3,644 ft.
J. S. Abercrombie, trustee's No. 2 Tarbutton, Henry Griffith League, 385 ft. from E line and 21 ft. from N line of tract	Cem. 9⅝-in. casing 4,642 ft.
J. S. Abercrombie, trustee's No. 3-B Barber, Henry Griffith League, 538 ft. from E line, 70 ft. from S line of tract	Drlg. sand and boulders 908 ft.
J. S. Abercrombie, trustee's No. 1 S. E. Morgan, 225 ft. N of S line in center of Strip 2 (4.4 acres), Henry Griffith League	Rig.
Sinclair Oil & Gas Co.'s No. 8 Wilburn, Henry Griffith League, 350 ft. W of No. 7 and 48 ft. from N line of tract	Drlg. shale 3,972 ft.
Sinclair Oil & Gas Co.'s No. 9 Wilburn, Wm. Hodges Sur., 50 ft. N of S line and 550 ft. W of No. 6	Spudded.
Sun Oil Co.'s No. 2 Winfree, W. D. Smith Sur., 50 ft. E of SW line and 150 ft. N of S line of tract	Set 229 ft. of 5-in. (O.D.) screen 5,359 ft.
Sun Oil Co.'s No. 11 Wilburn, Wm. Hodges Sur., 550 ft. W of No. 5 and 50 ft. from N line of tr.	Set 1 joint screen 2,610 ft.; swabbing.
Sun Oil Co.'s No. 12 Wilburn, Wm. Hodges Sur., 50 ft. from N line and 75 ft. W of No. 11	Derrick.
The Texas Company's No. 7 Wilburn, Henry Griffith League, 116 ft. S of Humphreys Corp.'s No. 8-H Kirby	Drlg. hard sand 3,800 ft.
The Texas Company's No. 2 Lawrence, Henry Griffith League, 240 ft. from E line and 412 ft. from N and S lines of strip	Drlg. 9⅝-in. plug 2,720 ft.
HUMBLE—HARRIS COUNTY	
Southern Coastal Oil Co.'s No. 3 Perkins, John Jones Sur., 150 ft. N of No. 2	Derrick.
Sun Oil Co.'s No. 25 Bender, W. B. Adams Sur., 1,155 ft. from C of R.R. on an extension of the N line of the Bender North Addition and 8 ft. S	No report.
The Texas Company's No. 37 Koehler, J. B. Stevenson Sur., 717 ft. E and 603 ft. S of NW cor. of SW Fee tract	Rig.
The Texas Company's No. 46 Stevenson fee, 1,630 ft. N and 1,690 ft. W of SE cor. of J. B. Stevenson Sur.	Rig.
PORT NECHES—ORANGE COUNTY	
The Texas Company's No. 1 Polk-Kuhn-Glass, 260 ft. E and 1,545 ft. S of SW cor. Marshall Beaucham Sur., in the T. J. Notgrass Sur.	Drlg. sticky shale 2,361 ft.
The Texas Company's No. 3 Kuhn, 587 ft. S and 150 ft. W of NE cor. of the Mary E. Hall Sur. No. 2	Location.
HULL—LIBERTY COUNTY	
Republic Prod. Co.'s No. 144 Dolbear, Jesse Devore Sur., 250 ft. W of No. 97 and 200 ft. SW of No. 99	Drlg. 1,600 ft.
Weneedan Oil Co.'s No. 2 Palmer, Chas. Underton Sur.	Shut down 2,110 ft.
Sun Oil Co.'s No. 10 Carr	Drlg. 910 ft.
PIERCE JUNCTION—HARRIS COUNTY	
Gulf Production Co.'s No. 33 Taylor, James Hamilton Sur. No. 52, 300 ft. E of No. 33 and 50 ft. from S line	Drlg. shale and lime 2,312 ft.
Moody Corp.'s No. 2 Boyles (W.O.), W. E. Armstrong Subd., B.B.B.&C. No. 1,028, 50 ft. from E line and 101 ft. from N line of tract	Pulling liner to deepen 3,872 ft.

(Continued on Page 69)

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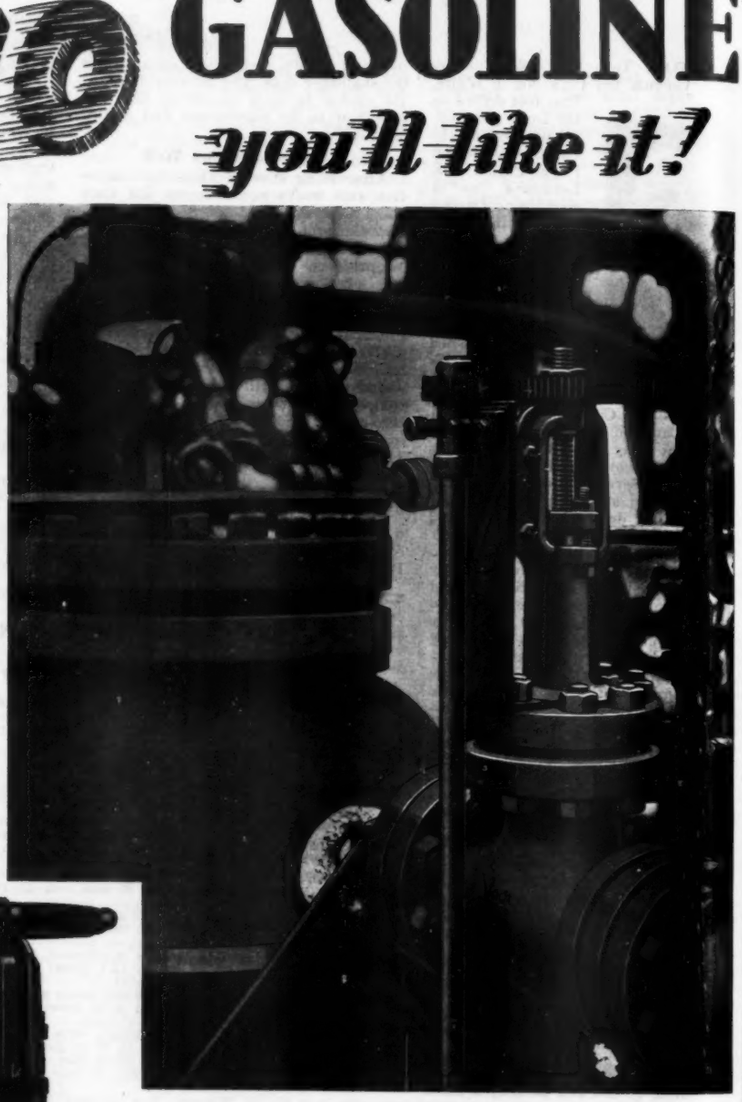

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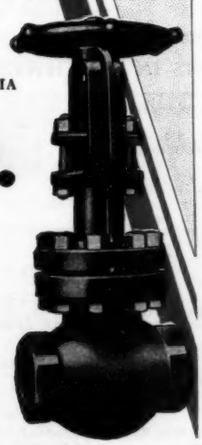

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Two More Crevice Wells Promise Oil

New Pool Southwest of Darst Creek Looks More Favorable Following Drill Stem Tests. Renewed Field Activity

By B. D. Stevenson
Staff Correspondent, Southwest Texas Fields

SAN ANTONIO, Tex., Oct. 26.—Two more crevice wells are likely to be added to the new pool southwest of the Darst Creek Pool in Guadalupe County. John F. Camp's No. 1 Dan Denman and the Humble Oil & Refining Co.'s No. 1 Dan Denman went into crevices at around 2,400 feet and lost returns and on drill stem tests oil filled both stems in a few minutes. They have set casing. Camp's well, about 1,000 feet southwest of the Humble test, hit the crevice at 2,391 feet and the Humble's No. 1 Dan Denman, 900 feet south of Camp's discovery well, hit the crevice at 2,380 feet.

This extension, which is a mile southwest of the Darst Creek Field and probably with dry territory between them, consists of two completed wells on the Sue Denman tract and the two now in process of completion on the Dan Denman tract, the two on the Sue Denman being offsets. The four tests give the pool an extent northeast and southwest of about half a mile. There is some talk of tests on the south side of the Guadalupe River. With the exception of the 100 acres held by Camp out of the Humble block, the Humble holds all the land immediately around the new producers. The Camp No. 1 Dan Denman is only about a quarter of a mile north of the Guadalupe River.

A little south of the Guadalupe River there are some leases not in big company hands that are right in line with the new producers and the trend of the Darst Creek Field.

In Caldwell County, west of Lockhart, near the Jolly Pool discovered by the Shell Petroleum Corp., with production at around 1,300 feet and in the Edwards lime, R. R. Ogden has brought in his No. 1 Sue Nealson at 1,300 feet, topping the Edwards at 1,297 feet and got about 5 bbls. of oil and 20 bbls. of water. There are only a few wells in the Jolly Field and all were light producers.

In western Bexar County, J. E. Anderson has set casing at 1,117 feet on top of the Anacacho, with total depth 1,135 feet in No. 1 Suburban Irrigated farms tract. It has a good showing of gas and the owner is anticipating a pretty good gas well. This wildcat is in the western edge of Bexar County near the Medina County line in the C. Logan Survey about 3 miles north of the southwest corner of Bexar County and about 8 miles north of nearest production in the Somerset Field.

Pettus Field

Buchanan & Lefevre's No. 1 Ray brought in the last week proved a half mile extension to the new pool, but is not completed yet. Four hours after starting to bail the test came in flowing and hit the crown block. Later it subsided and had to be agitated by swabbing to make it flow. Then some bottom hole water developed and it was decided it was drilled too deep and is being plugged back about 5 feet from total depth of 3,908 feet. It topped the sand at 3,887 feet and the last four feet of the hole didn't look good. The upper part was well saturated. Chances are when it is brought in again it will make a fine well. It is below sea level. Datum to the top of the sand was minus 3,545 feet compared to minus 3,592 feet on the Damac discovery well and it had 16 feet of good sand, compared to only 5 or 6 feet in the discovery well. It is over 3,000 feet southwest of the discovery well and the higher log and thicker sand makes that territory look good. There are no dry holes farther to the southwest within reasonable distance.

The new pool is about a mile southwest of the Pettus townsite pool with seemingly condemned territory between them. The old pool is over 2 miles long and some think the new pool will extend as far to the southwest. The completion of the Buchanan & Lefevre well will call for immediate offsets and undoubtedly there will be some tests drilled between it and the Damac well.

The disappointment of the field is the T. B. Slick's No. 1 Ray, 660 feet north of the discovery well which failed to get production in the sand and has been abandoned at 4,123 feet.

Saxet Field

Neal, Milton & Kepley have pulled the liner in the No. 1 Roark in the north edge of the Saxet Field in Nueces County which showed only salt water after it had flowed pure pipe line oil on a drill stem test. When the plugs were drilled the hole was deepened a little and went through a second cap and may have gone into salt water. The liner is to be reset with lead seal to see if the water is coming from behind the casing from an upper sand. If that fails to shut it off something else will be tried.

This week the Gulf Coast Oil Co.'s No. 1 Elder is down 4,892 feet, presumably in the same sand as No. 1 Roark and has a showing of oil and has set casing. This well is over 2 miles west of No. 1 Roark and the axis of the structure runs north and south. It is presumed there are minor folds paralleling the major one and with small synclines between and it is possible for some of these tests to pick up production in the same sand off to the west.

In addition to the tests shown on the map on page 98 of The Oil and Gas Journal, October 22, as having gone to 4,800 feet and below, two others, the Saxet Oil Co.'s No. 2 Baldwin directly in line south from the No. 1 Roark and the Moody-Seagraves' No. 1 Smith, 2 miles west of it, also went below 4,800 feet and each had showings in that sand but failed to get satisfactory tests of the sand and plugged back to the shallower sands.

The surface elevation is not much to reckon with in that area. It runs from 48 to 50 feet, with not much more than 2 feet difference in the surface elevation of any of the tests.

Increased Activity

There were 20 new locations announced last week, the largest for many weeks. Since the middle of the summer there has been a noticeable increase in activity all through Southwest Texas, which while not large is sufficient to attract attention and be significant. For the four weeks ending the middle of last July there were 22 new locations announced. Prior to that there were almost none for several weeks. For the month ending the middle of August there were 33 new locations, the month ending the middle of September 31 new locations and the month ending the middle of October 54 new locations.

Miscellaneous Operations

Camp and the Stanolind Oil & Gas Co.'s No. 2 Pettus in Goliad County at 4,314 feet with sand from 4,304 feet, tested dry. This test is 15 miles northeast of the Pettus Pool in Bee County and is about 1,600 feet northwest of No. 1 Pettus, which at 4,280 feet made a few barrels of oil. No. 1 was thought to be an edge well and No. 2 was drilled to prove out the idea, but it seems to have failed.

Buckley Ranch Oil & Gas Co. (Joe Bruner) No. 1 Buckley has set casing at 3,417 feet to protect the hole and with total depth of 3,503 feet plans to core all the rest of the way down to 4,500 or 5,000 feet. The test is in southern LaSalle County and is being watched with considerable interest.

Found 11 Sands

O. W. Killam found 11 sands in one of the tests he drilled in Webb County near the station of Bruni and in the east edge of the 2,350-foot Cole gas field. The total depth of the hole, drilled a year or more ago was over 4,000 feet. Several wells have been completed as gassers at around 2,350 feet and now No. 22 Bruni is to be carried down to a sand at about 2,800 feet which thus far has not been developed.

Southern Gas Utilities' No. 1-E Benavides at the south end of the Cole Field in Duval County came in a 35,000,000-foot gas well at 2,451 feet, matching in size the Magnolia Petroleum Co.'s No. 1 Benavides, completed some weeks ago at 2,465 feet and an east offset. The two are the only wells in that sand and are the farthest south producers in the field.

F. H. Etheridge's No. 1 Bustamente in the lower part of the Escobas Pool and completed in the second sand at 1,477 feet, came in flowing at the rate of 500 bbls. a day. Report of the drill stem test was given last week. It is one of the best wells in the field in the second sand. In the new activity that is breaking out in the Laredo district efforts are shaping to test for a further extension south of the Escobas Pool.

Cole Petroleum Co. got a 100-bbl. well in No. 70 Benavides, in Section 19, on the east edge of the Cole gas field, and is now making a start on No. 71, farther to the east and farther from the gas production.

Two new tests were announced the past week that are likely to be watched with interest. M. W. Eiser is starting No. 1 Wells in southwestern Guadalupe County and south of the two tests drilled by the Grayburg Oil Co. a year or more ago.

Also Jacob, Buzzini and Pickett are to drill north of the old Calliham Field in McMullen County for a deep test on the Jacob ranch.

WILDCAT OPERATIONS IN SOUTHWEST TEXAS

ATASCOSA COUNTY

Company, farm and location—	Remarks:
Glen Mathis' No. 2 Mrs. C. Martin, 100 ft. SE of No. 1.	T.D. 2,930 ft; S.D.

BLANCO COUNTY

Hardy-Sitton's No. 1 McMillan	T.D. 602 ft; S.D.
Theo. Hicks' No. 1 Specht, 1,500 ft. from S line, 500 ft. from W line of farm, in Thomas M. Fowler Sur. No. 27 in extreme south point of county	T. D. 1,600 ft.; drlg.
Liles Adams et al's No. 1 Luders, 150 ft. to S line, 1,420 ft. to E line of James Stanford's No. 155	T.D. 1,100 ft; standing.
McCleary et al's No. 1 Schenling, 900 ft. to SE line, 600 ft. to S line of J. A. Rouse No. 118 Sur., 4 miles SW from Blanco City	T.D. 574 ft; S.D.
C. Rosenfield's No. 1 Hohenberger, 300 ft. to W line, 1,260 ft. to N line, Sur. No. 94	T.D. 712 ft; S.D.

BASTROP COUNTY

W. A. Allen's No. 1 Birmingham, Jas. Stewart Sur.	T. D. 1,215 ft.; standing.
Texas Dev. Co.'s No. 1 C. H. Ray, 800 ft. from W line and 400 ft. from S line of farm, in Thos. Christian Sur.	T. D. 1,400 ft.; drlg.

BELL COUNTY

Field & Lange's No. 1 Stubblefield, 450 ft. from S line and 150 ft. from E line of farm in Antonio Manchaca Sur.	T.D. 410 ft; drlg.
J. W. Riley's No. 1 W. S. Chaffin, in M. Griffin Sur.	Spudded and S.D.
Jas. Scroggins' No. 2 Warrick, Ingram Sur.	T.D. 1,425 ft; fishing.

BEE COUNTY

Alexander et al's No. 1 McFall, 3 miles S Skidmore	T.D. 1,870 ft; no report.
Hughes et al's No. 1 Martin, 1,000 ft. S of Simms Oil Co.'s No. 1 Holzmark in John Lyford Sur.	Rigging up.
Humble O. & R. Co.'s No. 1 Laura Thompson, 6,360 ft. from N line, 15,100 ft. from W line of tr. in Garrett Roache Sur., S part of county	T. D. 2,300 ft.; drlg.
Mauldin et al's No. 1 Kimball, 300 ft. S Grayburg's No. 1-A Kimball, S. Winship Sur.	T. D. 3,544 ft.; dropped from report.

(Continued on Page 66)

SOUTHWEST TEXAS PROVEN AREAS

DOBROWOLSKI POOL—BEXAR COUNTY

Company, farm and [illegible]	Remarks:
W. S. Rogers et al's No. 1 L. Donnop, Juan Montez Sur.	T.D. 612 ft; S.D.
Gatlin Oil Co.'s No.9 Beck	Making location.
Whipple et al's No. 1 Gembler, 3,000 ft. to S line, 150 ft. to E line of A. Manchaca Sur.	T. D. 225 ft.; drlg.

PETTUS POOL—BEE COUNTY

J. L. Mauldin's No. 1 fee, 1,300 ft. N of S line, 150 ft. E of Medio Creek, Kerr County	T. D. 3,930 ft.; dropped from report.
Geo. N. Moore et al's No. 2 Freeland, in Jno. Pace Sur., 1,000 ft. from S line, 600 ft. from E line of survey	T. D. 4,297 ft.; dropped from report.
United Prod. Co.'s No. 39 Ray, 1,130 ft. to SE line, 2,396 ft. to SW line of T. Hanson Sur.	T. D. 6,490 ft.; drlg.
T. B. Slick estate's No. 1 Ray, in Kerr Sur., 210 ft. W. of NE cor. of Jno. W. Williamson Sur. and 330 ft. N of N line of same survey (location changed)	T. D. 4,123 ft.; abnd.
Buchanan & Lefevre's No. 1 Ray, 3,154 ft. from E line, 150 ft. from N line of Jno. W. Williamson Sur.	T. D. 3,908 ft.; plugging back
H. H. Weinert's No. 1 Ray, 150 ft. N and E lines of lease in Jno. W. Williamson Sur.	ft. Derrick.
Houston Oil Co.'s No. 2 Portis, 330 ft. from N and W lines of A. Smalley Sur.	Location.

BRUNER POOL—CALDWELL COUNTY

Joe Bruner's No. 1 Malone, 150 ft. to N line, 750 ft. to W line of tr., A. Floyd Sur.	T.D. 2,572 ft; set csg.; standing.

S.R.C.-VACUUM POOL—DUVAL COUNTY

S.R.C. and Vacuum Oil Co.'s No. 5 Duval Cattle Co., 150 ft. W. 330 ft. N of No. 1	Rigging up.

SCHOOLFIELD-O'BYRNE POOL—DUVAL COUNTY

Magnolia Pet. Co.'s No. 5 Wilson, 330 ft. from N line and 1,320 ft. from W line of Sur. No. 134	T. D. 2,416 ft.; set csg.
The Texas Co. No. 3 Bishop Cattle Co., 1,175 ft. from W line, 330 ft. from S line of Sur. 138	Location.
Cole Petroleum Co.'s No. 71 Benavides, 365 ft. from SE line, 442 ft. from NE line of Blk. 8, Sec. 19, Cole sub. Mariana Arispe grant	Derrick.

(Continued on Page 66)

BALANCED CEMENTING PRICES

If there were two cementing companies with the same amount of equipment in each of the fields where Halliburton is now operating, and each getting the same amount of cementing work, both companies would have to lose money or go up on present prices.

As it is, one responsible cementing company spread over the different drilling areas can better take care of the irregular rise and fall of volume of cementing business in those areas at the least cost to the oil industry—and do it with uniform quality.

HALLIBURTON OIL WELL CEMENTING CO.
Duncan, Oklahoma

Watch Morgan County, Colorado, Test

Prairie Operation Probably Most Important Wildcat Drilling There. Hobbs Potential Drops. Emery County, Utah, Wildcat

By Tolbert R. Ingram
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., Oct. 26.—Completion of the Continental Oil Co.'s No. 1 Gadbois, in the Greasewood Field in Colorado, a test half a mile south of the nearest producer, has been delayed by a fishing job. The Platte Valley Petroleum Co.'s No. 1 Patterson, the discovery well, is to be carried down to test the next sand, the Dakota. The Prairie Oil & Gas Co.'s No. 1 Mortier, 6 miles southeast of production, made 3,500 feet of hole in three days. The Colorado Associated well in Morgan County is no longer a mystery. Frank E. Kistler & Co. have taken an option on an uncompleted well and acreage on the Middlemist Dome in Washington County; the Mayer Oil Co. has acquired 7,000 acres on the Berthoud Dome in Larimer County, and will complete a drilling well; and the Gulf State Oil Corp. has taken over 12,500 acres and an uncompleted well south of Colorado Springs.

The Hobbs Pool in New Mexico was given a potential of 1,142,240 bbls., a drop of 33,994 bbls., due to special allowable outlet being given two wells showing water and one well off production. The Continental Oil Co. made a new location in Section 33. One small well was completed in San Juan County.

Utah reported a wildcat spudding in Emery County.

The efforts to test the Muddy sand on the Midway Dome in Wyoming have been abandoned and another well will be drilled to that horizon. The Midwest Refining Co. has oil in its No. 24 Rosenberg, on the Frannie Dome, indicating a half-mile extension of that pool. The Kinney-Coastal Oil Co. completed a small gas well on the Pilot Butte Dome in Fremont County.

Three gas wells were completed in the Cut Bank Field in Montana, extending the field 2½ miles to the south and half a mile to the northeast.

COLORADO

Morgan-Weld Counties

The veil of secrecy which had been thrown around the Colorado Associated Oil Co.'s No. 1 Pumphrey, C SE SE Section 14-4n-58, on the North Fort Morgan Dome in Morgan County, when coring began in the Muddy sand, was lifted today and the results disclosed. Using a 6¼-inch core bit, the drill went through the Muddy sand 22 feet. The sand had a showing of gas and a little oil. It was badly broken and cross-bedded. Sixty feet under the Muddy the Dakota was picked up, the top being at 5,830 feet. The Dakota was drilled into 15 feet and showed saturation of high gravity crude. There was gas in the top of the sand and the oil below the gas. The 8⅝-inch will be set at 5,825 feet and the sand tested.

On the basis of the above, the log was as follows: Muddy sand, 5,748-70 feet; shale break, 5,770-5,830 feet; top of Dakota, 5,830 feet; total depth, 5,845 feet.

The importance of this wildcat, in view of the widespread lease play in northeastern Colorado, following the discovery of oil on the Greasewood Dome in Weld County, can hardly be overestimated. The well is located 4 miles to the northwest of Fort Morgan, near the Union Pacific Railroad, and 18 miles to the southeast of the Greasewood operation. It is on the Fort Morgan arch as outlined by the United States Geological Survey in Bulletin 796-B and about 6 miles to the west of the axis as mapped in that report and on a southeastern extension of the Greasewood anticline which is shown on that map as running in a northwest-southeast direction.

The No. 1 Pumphrey disclosed that the formations have thinned considerably as compared with the wells on the Greasewood Dome and that the Muddy sand was not only 600 feet higher than was expected, but more than 700 feet higher than at Greasewood, based on sea-level datum. The elevation of the Pumphrey well is 4,467 feet above sea level and the top of the Muddy was at 5,748 feet, putting the sand 1,281 feet below sea level. The Reiter-Foster Oil Co.'s No. 1 Ida Johnson, C NE NW Section 24-6n-61, on the Greasewood Dome, has an elevation of 4,650 feet and the top of the sand was at 6,642 feet, 1,992 feet below sea level. This puts the Muddy sand in the Pumphrey well 711 feet higher than in the Ida Johnson well 18 miles to the northwest. Indications of the thinning of the beds was first noted when the Pumphrey well cored the Hygiene at 2,897 feet, showing that the formations were running about 100 feet higher than expected. The Timpas was cored at 5,325-47 feet, indicating a further thinning and putting the Muddy about 600 feet higher than it had been mapped. The discovery of oil in the Dakota further enhances the importance of the test as none of the wells at Greasewood have penetrated the second sand in the Dakota series, though preparations are being made to deepen the discovery well into that horizon. Inasmuch as the casing for the Pumphrey well is not yet on the ground and probably two weeks will be taken in running and cementing the pipe and waiting for it to harden, it will be some time yet before it is definitely known what it will make in the way of production. While it is possible that the Muddy might have shown for a gas well if the hole had been unloaded and tested, it was decided to make a test of the better oil showing in the second sand.

What Geology Disclosed

The geology on the North Fort Morgan Dome was worked out over a period of months by geologists in co-operation with the geological staff of the Midwest Refining Co. This datum disclosed a low, broad, flat structural area with a large drainage. It is an elongated, egg-shaped structure with a vertical closure in excess of 70 feet, with the axis extending in a northwest-southeast direction. The structure is approximately 7 miles long and 4 miles wide at its greatest width. The detailed work was done by E. D. Johnson, and associates. Mr. Johnson was for a long time an employe of the Midwest Refining Co. under the direction of Claire Coffin, chief geologist, and Harry Aurand, chief of the field division. H. Norman Snively, former chief geologist of the Standard Oil Co. of California, checked and approved the area.

The Colorado Associated Oil Co. was organized to take over the block and that company has in excess of 17,000 acres covering the structure under an arrangement which will permit of a co-operative group development plan. William A. Meyers, who was active in the original development of the Hiawatha gas area in northwestern Colorado and southwestern Wyoming, is president of the company. H. Leslie Parker, discoverer of the Big Muddy Field and co-discoverer of the Midway-Geary structures in Wyoming, is vice president. B. E. Ireson, formerly assistant secretary and treasurer of the Continental Oil Co., is secretary and treasurer. Sidney H. Keoughan, formerly president of the Continental Oil Co., and Arthur O. Olson, president of the Olson Drilling Co., are additional directors.

Contract for the well was let to the Olson Drilling Co. The Midwest Refining Co. furnished the rig which was used in drilling the Salt Creek deep test. The well spudded on September 5 and reached the top of the Muddy in approximately one month. The only string of pipe so far run is the conductor string of 15½-inch which was cemented at 158 feet.

Interest Transferred

When the Continental Oil Co.'s No. 1 Gadbois, C SE SW Section 24-6n-61, on the Greasewood Dome in Weld County, lost its tools and completion was delayed, interest turned this week to the Prairie Oil & Gas Co.'s No. 1 Mortier, C NE NW Section 2-5n-60, Jackson Lake district, in Morgan County. This well is 6 miles southeast of the producers on the Greasewood structure and probably is the most important wildcat now drilling in that area. It is on the major fold running in a southeasterly direction from the Greasewood operation, as mapped by the United States Geological Survey. There is a wide difference of opinion in regard to structural conditions in that district and the Prairie well is expected to throw considerable light on whether the producers at Greasewood are on the southeastern or the northwestern edge of the structure. No. 1 Mortier cemented 15½-inch at 121 feet and began making hole with the rotary below the conductor pipe at 9 o'clock Sunday morning, October 18. It made 1,400 feet the first 24 hours and on Wednesday morning was drilling at 3,500 feet. This record indicates the well will be an early completion and upon the outcome will depend considerable drilling east and southeast of Greasewood. The Prairie well is supposed to be on a local high on the major fold. The Sultan Drilling Co. has the contract. Water is being taken from Jackson Lake. Four boilers are furnishing the power and the derrick is 134 feet high.

The Continental company's No. 1 Gadbois, half a mile south of the Platte Valley Petroleum Co.'s No. 1 Patterson, the discovery well at Greasewood and the nearest producer, was due for completion this week. After cementing 7-inch at 6,578 feet, the hole was standardized, the plug was drilled out and new hole made to 6,593 feet. The tools were 6 feet off bottom and the driller was putting kinks into the cable when the brakes slipped. The tools dropped and the cable, held by the wrench, was snapped in two at the casing head. The delay makes it uncertain as to when the well will be drilled in. This well is estimated to be about 5 feet lower structurally than the next well half a mile to the north.

The Greeley Oil Co.'s No. 1 Gadbois, C NW NW Section 25-6n-61, one-fourth mile southwest of the Continental's No. 1 Gadbois, is shut down at 5,412 feet to run 9⅝-inch pipe. The casing is on the ground, but it may not be run and cemented until the diagonal offset is drilled into the sand. The only pipe in the hole is the conductor string which was set at 216 feet.

Reiter-Foster Oil Co.'s No. 1 Johnson-Juhl, C SE SE Section 14-6n-61, half a mile west of the Continental's No. 1 Briggs, the nearest producer, set and cemented 7-inch at a total depth of 6,640 feet and is changing over to cable tools. This well is running several feet higher than the Briggs well.

Platte Valley Petroleum Co.'s No. 1 Henry Niles, C SW SE Section 13-6n-61, an offset to the east of the Briggs well, is digging cellar. The company has been negotiating with one or two of the major companies to put down this well, but no deal had been consumated and rather than run the risk of losing the lease, the operation was started on its own account. This well is on the block for which the Reiter-Foster Oil Co. has the first call on the oil produced, and this is said to have been a handicap in making a deal for the drilling of the offset.

Reiter-Foster Oil Corp.'s No. 1 William Wilson, C NE SE Section 24-6n-61, half a mile southeast of the discovery well and the same distance northeast of Continental's No. 1 Gadbois, is spudding at 131 feet. Manning & Terry, Inc., have the contract and rotary from No. 1 Johnson-Juhl is being used.

Aztec Corp.'s No. 1 State, C NE NE Section 16-6n-61, 2½ miles to the west and north of No. 1 Briggs, is shut down at 100 feet pending completion of deal reported pending in Oklahoma. It is understood that arrangements have been made to resume not later than November 15.

Continental's No. 1 Briggs, C SE SW Section 13-6n-61, has been choked down to a three-fourths inch bean and is making 482 bbls.

Platte Valley Petroleum Co.'s No. 1 Patterson, NE SE NW Section 24-6n-61, the discovery well, has been deepened 2 feet to 6,693 feet and is bottomed in blue shale. The base of the Muddy was at 6,690 feet, making the sand 30 feet thick. It is planned to carry this hole down to the Dakota, which has not been tested in any of the Greasewood wells. Production in this well through the 4¾-inch dropped to 118 bbls. natural on October 12. After cleaning out the flow tank and relieving the back pressure, it increased to 185 bbls.

Ten miles northwest of the Greasewood Pool, the Prairie Oil & Gas Co.'s No. 1 O'Toole Brothers, C SE NE Section 33-7n-62, Crow Creek district, is building rig. The Sultan Drilling Co. has the contract.

Twelve miles to the south and 3 miles west of the Prairie's Crow Creek wildcat, the Gulf States Oil Corp.'s No. 1 Bengston, C NW NW Section 6-4n-63, Box Elder district, is still a location. Robert Sweeney, who has the contract, says this well is to be drilled at once and that a rig has been purchased in the Fort Collins Field.

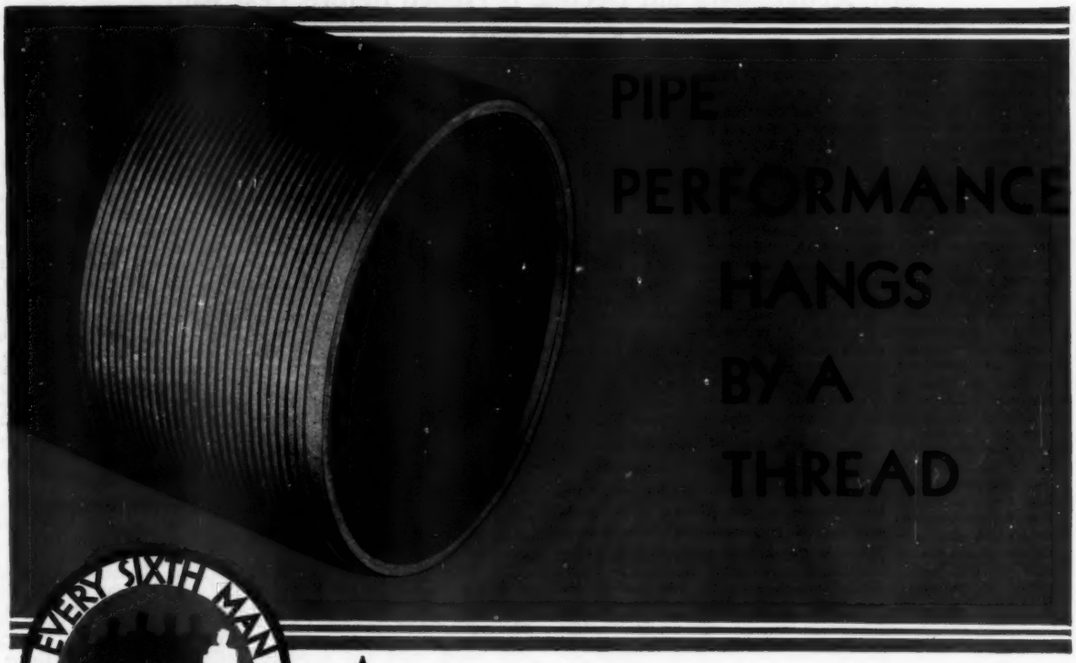
In Morgan County, interest in the Colorado Associated Oil Co.'s No. 1 Pumphrey, C SE SE Section 14-4n-58, North Fort Morgan Dome, has somewhat subsided due to absence of any information from official sources as to what has taken place.

The Indian Territory Illuminating Oil Co.'s No. 1 State, C NE NE Section 16-1n-57, was drilling at 5,920 feet on October 17. The derrick has been boxed in for winter operations and it is understood drilling is to continue until it runs out of hole. It was unofficially reported through the Dakota at 5,674 feet and at its present depth it is supposed to be well into the Morrison.

Washington County

Frank E. Kistler & Co., of which Frank E. Kistler, organizer of the Producers & Refiners Corp., is the head, has taken an option on the Middlemist well in the SE SW SE Section 14-4s-56, on the Middlemist Dome and will undertake completion of this test if certain conditions can be complied with. This well was started in 1929 by M. T. Smith & Sons, and later was taken over by the Middlemist Oil Co. About a year ago Fred R. Zimmerman, former governor of Wisconsin, took over the operation and did some work, but soon retired. The well has been drilled to a total depth of 1,510 feet at which depth the 12½-inch was reported frozen. The Middlemist structure lies 75 miles due east of Denver and was geologized by C. T. Lupton. It lies on the southern extension of the Fort Morgan uplift and is favorably regarded.

(Continued on Page 77)



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California Crude Market Stiffening

Expected Gasoline Market Will Strengthen. Production Still Above Mark but Decline Is Hoped Before Year End

By L. P. Stockman
Staff Correspondent, California Fields

LOS ANGELES, Calif., Oct. 24.—Crude oil production in California averaged well over 500,000 bbls. per day during the past week and all indications point to the probability that state production will continue to hover around this figure for some time to come. This is particularly interesting in view of the concerted attempt to reduce crude oil production to 487,500 bbls. per day, the objective toward which California producers have been striving for several months. There is a probability that state production may decline well under 500,000 bbls. per day before the close of the current year, provided there is no resumption of drilling activities during the interim. During the past several weeks new completions have offset the normal decline in settled production but the production curve indicates a definite settling and gradual decline is expected to become more pronounced late in December.

There has been a very decided stiffening in the crude oil market during the past few weeks with the result that there is very little spot oil available for purchase. The elimination of distress crude can be attributed to a normal decline in production and the purchase of spot oil by major refiners. Stringent curtailment and decreased drilling have also been contributing factors toward the improved condition of the crude oil market. The scarcity of spot oil has become so acute that several independent refiners are offering premiums ranging from 2 to 10 cents per barrel for sweet crude, of which there is very little available.

The improvement registered by the crude oil market during the past few weeks has not yet been reflected in refined oil prices but it is the prevailing opinion that gasoline prices will strengthen within the next few weeks. Very little headway has been made in the effort to stabilize retail quotations due to the fact that several small refiners have been operating in excess of their requirements and have been obliged to dump their surplus at periodic intervals. The elimination of distress crude will automatically reduce refinery runs and tend to prevent the dumping of motor fuel on an already heavy market. The absence of distress crude and the inability of independent refiners to purchase crude oil at prices substantially below market, as has been done at Playa Del Rey during the past several months, should ultimately be reflected in refined oil prices. It will undoubtedly take several weeks to liquidate present excessive stocks held by independent refiners but upon the consummation of this program the refined oil market should show a considerable strengthening.

Elwood

Developments during the past few days indicate the possibility that deep zone exploitation may be started in the Elwood Field of Santa Barbara County within the next week or ten days. This projected development work, resulting from the recent discovery of a new deep zone, will be started very shortly unless operators are brought together immediately and a drilling moratorium effected. The Pacific Western Oil Co. is completing tentative arrangements to redrill and deepen wells Nos. 1 and 2 on tideland permit No. 92 from the present productive Vaqueros to the new zone discovered by the Barnsdall and Rio Grande in the immediate underlying Sespe. If the Pacific Western starts deepening operations on these two wells, the Barnsdall and Rio Grande will be obliged to redrill and deepen the two immediate offsets. The necessity of retarding deep zone exploitation at Elwood is evidenced by the fact that it may precipitate another competitive drilling program involving the Barnsdall and Rio Grande, Bankline Oil Co., Pacific Western, Honolulu Consolidated, Seaward Oil Co., Caroline Spalding and the Signal Oil & Gas Co. The importance which attaches to this lies in the possibility that field production may get beyond bounds and precipitate another new crisis. The logical procedure to follow at present is to suspend all production and drilling activities in zones below the present productive Vaqueros. This would make it necessary for the Barnsdall and Rio Grande to shut in No. 14 Bell Luton until conditions improve.

Importance of New Zone

The importance and productivity of the new zone found by the Barnsdall and Rio Grande in the Elwood Field probably will be determined in the very near future if the drilling program now under consideration is carried forward to a successful conclusion. In addition to the two wells of the Pacific Western just mentioned, Nos. 19 and 20 on the Bell Luton lease of the Barnsdall and Rio Grande, and well No. 5 on tideland permit No. 89 of the Bankline Oil Co. also may be carried on down to the New Sespe horizon. All three of these wells are new projects, the Bankline's well having just been spudded in while the two holes on the Bell Luton lease are below the 3,000-foot level. It is quite obvious that immediate consideration should be given to a drilling moratorium because once this work gets under way we will probably have a repetition of conditions which prevailed at Elwood during development of the Vaqueros sand. If development of the Sespe zone takes place in the near future, and all indications point in this direction at present, operators will find it necessary to effect an equitable curtailment of production, a factor which caused considerable wrangling during the development of the Vaqueros zone. It may be possible, of course, that operators will be able to keep within their present allowable of 26,000 bbls. per day by producing from the Sespe and suspend production activities in the Vaqueros. Under this plan, the Vaqueros could be repressured by natural gas from the Sespe formation. It is questionable, however, whether such a plan would be advantageous under existing conditions, as the present low price for crude oil is ample justification for a postponement of this work until some future date.

The discovery of commercial production in the Sespe formation at Elwood by the Barnsdall and Rio Grande two weeks ago is of considerable importance from an economic standpoint as it greatly enhances California's ultimate production of crude oil. It remains to be seen, however, whether there is any similarity from a production standpoint between the Vaqueros and the Sespe zones. Normally, the Sespe formation consists of a series of alternating oil sand and shales. It is logical to assume therefore that the Sespe will be somewhat inferior from a production standpoint. This formation, however, is especially long lived and should consequently be productive for a number of years. The oil, under normal conditions, is of a better quality than that produced by the Vaqueros.

The Standard Oil Co. lost its attempt to drill a wildcat in the Palms area of Los Angeles Basin a few days ago when the United States Supreme Court upheld a decision of the Circuit Court of Appeals which ruled that a zoning ordinance of Los Angeles was constitutional and while in effect precluded development work. The appeal to the Supreme Court was taken by both the Standard Oil Co. and Marblehead Land Co. on the contention of the latter that the police power was unreasonable and so arbitrary that it infringed upon its constitutional rights. The Standard Oil Co. was granted permission to drill a well on this acreage in 1927 when the Los Angeles city council passed a special ordinance withdrawing a small section of the tract from the provisions of the zoning ordinance. A rig was accordingly erected, but before drilling equipment could be moved in realty men and adjacent property owners registered a vigorous protest. Following these protests, the permit to drill was revoked and the area restored to its original residential status. The tract in question is approximately 10 miles from the center of the Los Angeles business district and is owned by the Marblehead Land Co. and leased to the Standard Oil Co. It had previously been used for farm purposes and there are three golf courses adjoining with a number of palatial residences nearby.

The Supreme Court also refused this week to review decisions of California courts in suits brought by Arthur Carr and four others seeking to compel W. S. Kingsbury to grant them oil permits on tidelands in the city of Huntington Beach. The action of the court sustained the validity of the California tideland leasing act withholding acreage within incorporated cities from such permits.

Belridge

The Belridge Oil Co. focused the attention of operators on the North Belridge Field of Kern County a few days ago when it successfully completed its No. 49 in Section 35-27-20 flowing 3,540 bbls. of 39.7 gravity oil per day from 5,595 feet. This new well, an offset to the Continental Oil Co.'s No. 2 Result, is flowing through an eighty-two sixty-fourths inch bean under a tubing pressure of 500 pounds and a casing pressure of 1,140 pounds. It was finished with a 6⅝-inch liner carrying 629 feet of 300-mesh perforated and a 4¾-inch flow string hung at 4,875 feet. The substantial production registered by the Belridge Oil Co.'s new well is of exceptional interest because the Continental's No. 2 Result and the Union Oil Co.'s No. 15 Belridge were only good for 1,000 bbls. each upon completion several months ago. The Belridge Oil Co.'s deep test, No. 64 in Section 27-27-20, is rotating ahead in a hard sandy shale at 6,550 feet, but has not yet shown any evidence of resulting in production.

Dominguez

The Union Oil Co. added two new wells to its list of producers in the Dominguez Field of Los Angeles Basin, increasing its daily production 1,505 bbls. On the Callender lease the company completed its No. 27 flowing 730 bbls. of clean 34.8 gravity oil and 3,000,000 feet of natural gas per day from 5,008 feet, the hole having been finished with a 6⅝-inch liner carrying 528 feet of perforated and 4,900 feet of 3-inch tubing. No. 16 Hellman, the Union's other completion during the week, was finished at 4,779 feet and completed flowing 775 bbls. of clean 35.1 gravity oil and 4,750,000 feet of natural gas per day. The Union is working on three other wells in this field at the present time, all of which should be tanking oil within the next five or six weeks. No. 4 Carson, completed a week or so ago, has been beaned back from 2,250 bbls. to 1,270 bbls. per day, in conformity with the existing curtailment program.

Kettleman Hills

No completions were registered in the prolific Kettleman Hills Field during the past week, but the Standard Oil Co. should have its No. 62-29-J tanking oil within the next few days. This project, the so-called jinx well because of the abnormal amount of mechanical trouble which it experienced during the course of drilling, has been cleaned out to bottom and the 4¾-inch flow string will be run in tomorrow. After fishing for approximately nine months with fair success, a combination 7-inch and 6⅝-inch perforated string was recently landed at 7,755 feet to insure the safety of the hole down to this point. On testing, a hole was subsequently found in the 7-inch casing at 6,995 feet and this was later cemented with 100 sacks of cement. The hole was eventually redrilled and cleaned out to bottom and preparations are under way to give it an early production test.

The Kettleman North Dome Association should also list a new well for completion in the near future as its No. 4-28-J is rotating ahead in the oil sand

TANKER SHIPMENTS FROM LOS ANGELES TO ATLANTIC AND GULF COAST PORTS

Commodity—	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Crude oil	.....	.....	.....	.....	.....	68,690
Fuel oil	.....	.....	.....	.....	.....	71,950
Diesel and gas oil	.....	.....	.....	.....	1,379,888	2,811,030
Gasoline	220,360	31,480	247,746	35,392	11,259,664	16,023,804
Kerosene	.....	.....	.....	.....	187,934	.....
Coastwise—						
Crude oil	216,356	30,908	268,057	38,295	17,652,805	12,785,013
Fuel oil	148,062	21,152	389,376	55,625	10,530,478	14,349,397
Diesel and gas oil	5,555	794	71,095	10,014	1,234,965	1,366,955
Gasoline	347,497	49,642	336,701	48,100	11,391,852	10,185,913
Kerosene	7,974	1,139	5,855	836	254,242	149,256
Naphtha distillate	.....	.....	.....	.....	4,952	.....
Exports—						
Crude oil	9,985	1,426	76,393	10,985	5,874,825	5,528,484
Fuel oil	341,519	48,788	136,561	19,509	10,913,414	14,522,704
Diesel and gas oil	5,860	837	13,092	1,870	2,864,844	3,809,444
Gasoline	135,470	19,353	143,111	20,444	7,101,697	13,181,959
Kerosene	74,869	10,696	.....	.....	1,396,048	3,085,709
Lubricants	.....	.....	.....	.....	36,353	27,434

TANKER SHIPMENTS FROM SAN FRANCISCO TO ATLANTIC, GULF COAST PORTS

Diesel and gas oil	.....	.....	.....	.....	.....	279,088
Gasoline	.....	.....	.....	.....	883,929	1,008,757
Lubricants	.....	.....	.....	.....	35,236	24,774
Coastwise—						
Fuel oil	120,046	17,149	62,590	8,941	2,870,978	2,746,972
Diesel and gas oil	.....	.....	.....	.....	346,660	310,222
Gasoline	135,606	19,372	132,948	18,993	3,644,567	3,631,937
Kerosene	3,813	545	4,740	677	259,094	190,269
Naphtha distillate	.....	.....	.....	.....	49,780	.....
Exports—						
Crude oil	.....	.....	20,511	2,930	269,592	59,993
Fuel oil	.....	.....	.....	.....	1,285,726	809,316
Diesel and gas oil	.....	.....	47,410	6,773	432,708	457,589
Gasoline	73,165	10,452	163,791	23,399	3,687,130	3,406,476
Kerosene	95,460	13,637	.....	.....	783,732	557,170
Lubricants	.....	.....	.....	.....	25,693	32,579

at 8,027 feet. This project is expected to be followed into production by No. 25-28-J, which has just passed the 7,900-foot level. The association is constructing a rig for a new well in Section 2-22-17 and this project, together with No. 58-20-J, should be spudded in shortly. The Associated Oil Co. has also started the construction of a new rig, which, when started, will be designated as No. 3 Whepley. The Associated has two producing wells on the Whepley lease at present, No. 1 flowing 1,650 bbls. per day and No. 2 flowing 1,100 bbls. The Standard and the Powell-Stockton Investment Co. are also rigging up one well each for early work.

The Petroleum Securities has reached a depth of 8,625 feet in No. 1 Burbank, a deep test in the middle dome of Kettleman Hills, and this well may be given an early production test as there is a good gasoline odor to the core samples recovered during the past few hundred feet. The status of this well, however, can be determined only on an actual production test as there is very little evidence of its potentiality at present. Officials of Petroleum Securities are confident of success, however, and operators interested in the field have already tentatively approved a unit plan of development in the event that commercial production is secured. A few matters of importance remained to be ironed out by the engineering committee, of which Floyd Bryant of the Standard Oil Co. is chairman, but this is of a technical nature and should be amicably adjusted. The proposed unit plan of development as now outlined has been approved by the Standard Oil Co., Petroleum Securities, Shell, Associated and the Bolsa Chica Oil Co. Committee meetings have been held frequently, and indications are that the unit plan will become effective immediately upon completion of the first commercial producer. The Standard is redrilling its No. 6-29-V, an offset to No. 1 Burbank of the Petroleum Securities, but should begin making new hole at 6,020 feet in the very near future.

Conservation of natural gas in the north dome of Kettleman Hills reached its maximum peak to date during September when the total wastage approximated only 210,612,000 feet, as compared with 1,203,502,000 feet during the preceding month. Wet gas delivered to absorption plants during these two periods aggregated 2,723,224,000 feet and 3,796,765,000 feet, respectively. Of the total natural gas production of 9,662,630,000 feet during September, the Kettleman North Dome Association produced 2,822,111,000 feet, the Standard 5,104,531,000 feet and the Associated, Petroleum Securities, Shell, Superior and Union 1,735,888,000 feet. The Pacific Gas & Electric Co. picked up 1,568,024,000 feet in September, while the Southern California Gas Co. purchased a total of 627,714,000 feet in September and 920,969,000 feet during August. In September, Kettleman Hills produced 1,854,499 bbls. of crude oil, an average of 61,817 bbls. per day, of which amount the Kettleman North Dome Association produced 787,027 bbls., Standard Oil Co., 595,308 bbls., and Union, Superior, Shell, Associated and Petroleum Securities the balance. Natural gasoline production totaled 15,635,165 gallons during September, the Kettleman North Dome Association being credited with 3,917,502 gallons, the Standard with 4,953,935 gallons and the remaining operators with 3,763,728 gallons. The Western States Gasoline Co. headed the production list with an output of 2,129,941 gallons during the month.

Fruitvale

Considerable interest is being manifested in the Fruitvale Field of Kern County following the recent completion of the Sea Hawk Petroleum Co.'s No. 1-A, brought in doing 410 bbls. per day from 3,760 feet, and several additional wells are scheduled for early spud. The Mohawk Petroleum Co. has staked location for a new well to be drilled in the heart of the town of Fruitvale on the McDermott property and rig material should be on the ground shortly. The Sea Hawk Petroleum has spudded in its second well in this field and E. P. Jorgensen has material on ground for his first rig. The Golden Bear Oil Co. has a rig up for its second well in Section 6-28-29 in the Round Mountain Field of Kern County, but has not definitely decided just how soon drilling operations will be resumed. This company completed a 6-inch line from the Round Mountain Field to Oildale, a distance of 12 miles, in order to permit the shipment of current production. The Golden Bear Oil Co. recently consummated a contract with Arizona interests to deliver 700 bbls. of Round Mountain oil per day for the next two years. The oil is to be used in the Arizona territory and the company's future drilling operations in the Round Mountain Field depend upon its ability to meet current demands of its Arizona clients.

Prospectors have become quite active in the Tulare Lake section of Kern County during the past several weeks and several additional wells are scheduled to be spudded in during the course of the next several months. This wildcatting is being done in an effort to develop commercial gas production on the assumption that there will be an outlet for additional production of natural gas if the Standard Oil Co. kills its two big gas wells in the North Dome of Kettleman Hills. The Kettleman Lakeview Oil Co. recently completed its No. 2 in Section 20-23-20 as a gas producer at 1,200 feet, but it has not been definitely determined whether this well si good for sustained production as the gas pressure shows a substantial reduction when the well is opened. Production of this well, which is located in the Tulare Lake region, is

(Continued on Page 80)

SOUTH TURNER VALLEY TEST LOOKS LIKE HIGH GRADE WELL

By Victor Lauriston
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, Oct. 24.—In the South Turner Valley, Hylo Oils' No. 1 LSD 12, Section 4-19-2w5, looks like a commercial producer of high-grade crude at 4,965 feet. The test got the sand at 4,955 feet and was drilled 10 feet into the producing horizon, when caving occurred, and the drillers have since been trying to clear a series of bridges. Though the hole is partially blocked, the crude is reported to have risen to practically the top of the casing, and a control head has been fitted and tankage provided to handle the production.

Hylo's No. 1 is in the Mercury area, offsetting Mercury's No. 1, the largest producer in the south field. Hylo's No. 1 had been standing for some time at around 2,000 feet when Mercury's No. 1 came in; following which a Calgary syndicate, comprising S. G. Carscallen, W. Fay Becker and Clarence and George Snyder undertook to complete the well. The test is still considerably above the lime horizon where Mercury's No. 1 got its production, Hylo's crude coming from a horizon approximating the Dalhousie sand.

The test was drilling with about 1,000 feet of open hole when the unexpected crude production was struck. The drillers after cleaning out will bradenhead the 8-inch and 10-inch pipe and probably take production from the present horizon without going to the lime. Samples of the crude tested 34.5, indicating that it is different from the usual light crude of the Turner Valley Field. No estimates have yet been made of the potential production, but indications are that Hylo's No. 1 will be the largest crude oil producer yet drilled in the field. Most of the light crude producers have declined rapidly, though Dalhousie's No. 5 which apparently got its production from the same horizon has held up very well for several years.

In the same general area, Miracle Oils' No. 2, LSD 16, Section 5-19-2w5, is drilling above the limestone at 5,271 feet, after a delay pounding up a lost cone. Miracle's No. 3, LSD 11, Section 4-19-2w5, is drilling below 4,588 feet.

In the far south, Mar-Jon-Freehold's No. 1, LSD 9, Section 28-18-2w5, is drilling below 2,300 feet but having a

(Continued on Page 73)

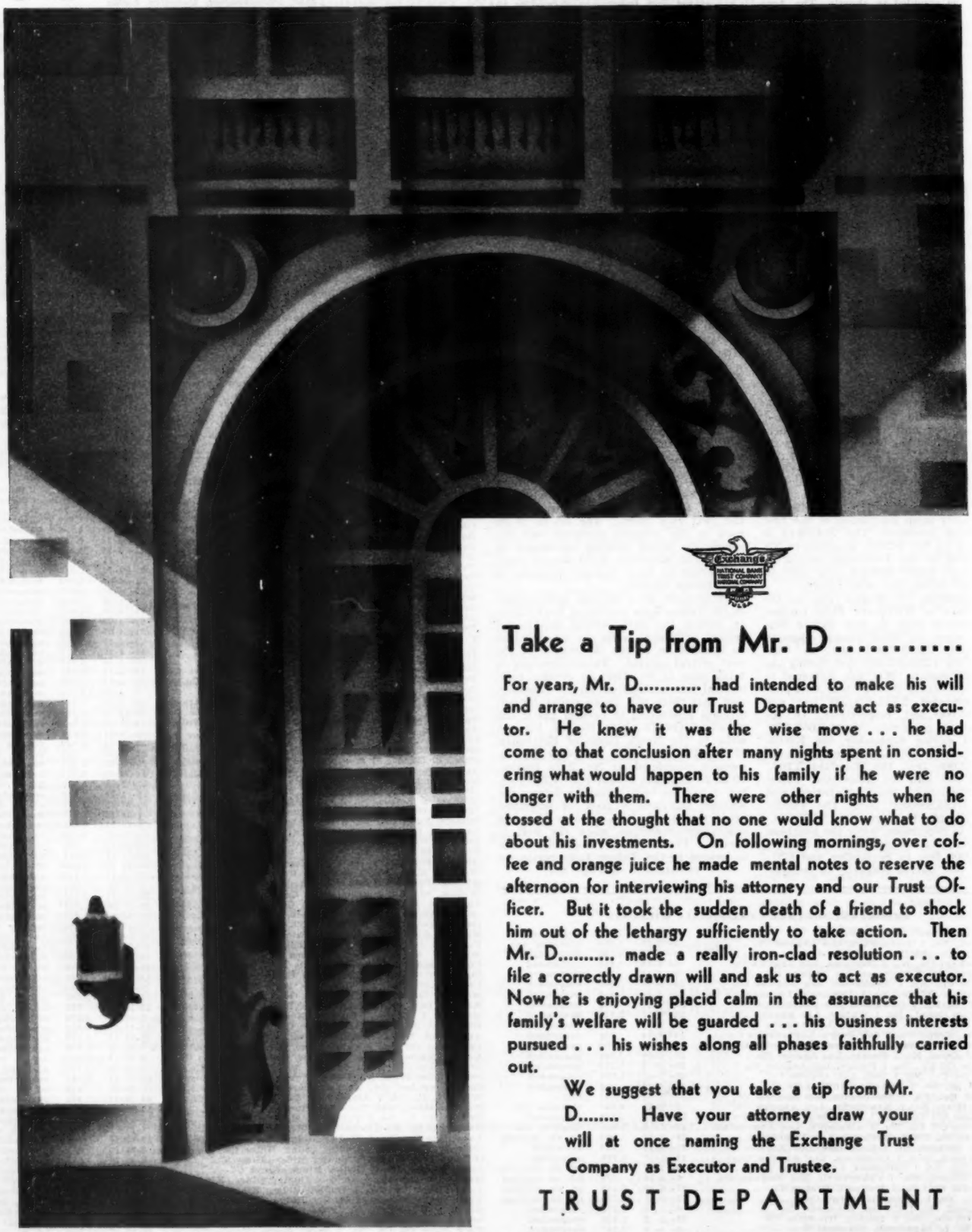
IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Hines Pet., No. 1 Ocean Park, Los Angeles Co.	9- 2-15	7,350	cleaning out
Taylor Oil Co., No. 1 Culver, Los Angeles Co.	12- 2-15	6,238	suspended
Westwood Oil Co., No. 2 Hermosa, Los Angeles Co.	6- 4-14	2,151	suspended
Baxter Pet., No. 1 Hermosa, Los Angeles Co.	5- 4-14	rig	suspended
Staple Oil Co., No. 1 Manhattan, Los Angeles Co.	24- 3-15	2,700	suspended
Pacific Shore Oil Co., No. 1 Lawndale, Los Angeles Co.	20- 3-14	rig	suspended
Smith, J. O., No. 1 Lawndale, Los Angeles Co.	20- 3-14	rig	suspended
Wilmington Consd., No. 1 Watson, Los Angeles Co.	17- 4-13	1,012	suspended
Ranger Pet. Co., No. 1 Watson, Los Angeles Co.	28- 4-13	rig	suspended
Pedro Pet. Corp., No. 1 San Pedro, Los Angeles Co.	14- 5-14	rig	suspended
Brubaker, W. O., No. 1 Van Nuys, Los Angeles Co.	11- 2-15	2,700	suspended
Rucker & Croul, No. 2 Puente, Los Angeles Co.	27- 2-10	2,200	suspended
El Dorado Oil Co., No. 1 Puente, Los Angeles Co.	20- 2- 9	2,110	suspended
Cudahy Oil Co., No. 1 Bell, Los Angeles Co.	30- 2-12	1,370	suspended
Jones, W. L., No. 1 Bell, Los Angeles Co.	31- 2-12	rig	suspended
Weist Oil Co., No. 1 Montebello, Los Angeles Co.	34- 1-11	4,902	idle
Blinn & Gray, No. 1 Montebello, Los Angeles Co.	6- 2-11	4,965	cleaning out
Yellowstone Oil Co., No. 1 Alhambra, Los Angeles Co.	24- 1-13	3,919	suspended
Yellowstone Oil Co., No. 2 Alhambra, Los Angeles Co.	19- 1-12	2,015	cleaning out
Rucker, L. W., No. 1 Calabasas, Los Angeles Co.	26- 1-17	1,004	br. sh. drilling
Caballero Estates, No. 1 Calabasas, Los Angeles Co.	23- 1-16	1,280	cemented
Olympic Corp., No. 1 Calabasas, Los Angeles Co.	18- 1-17	5,960	suspended
Simi Oil Co., No. 1 Calabasas, Los Angeles Co.	18- 1-17	2,695	sd. sh. drilling
Marbie, Willard, No. 1 Chatsworth, Los Angeles Co.	6- 2-16	525	hd. sd. drilling
Superior Oil Co., No. 1 Newport, Orange Co.	27- 6-10	2,860	sd. sh. drilling
Ajax Pet., No. 1 Newport, Orange Co.	21- 6-10	5,570	hd. sd. drilling
Beck, Alfred, No. 1 Corona, Riverside Co.	8- 4- 6	1,110	suspended
Alberta Oil Co., No. 1 Elsinor, Riverside Co.	35- 2- 2	3,435	suspended
Duncan, N. L., Sagebrush, Riverside Co.	8- 4- 6	1,157	suspended
Colan Dev. Co., No. 1 Redlands, San Bernardino Co.	25- 1- 2	2,392	redrilling
Mason Oil Co., No. 1 Salton Sea, Imperial Co.	1-17-15	615	sd. sh. drilling
Borderland Oil Co., No. 1 Encinitas, San Diego Co.	12-13- 4	2,519	suspended
Borderland Oil Co., No. 1 Point Loma, San Diego Co.	30-16- 3	5,124	will test
South Bay Oil Co., No. 1 Border, San Diego Co.	31-18- 2	1,243	suspended
Itasca Pet. Co., No. 1 Mesa, San Diego Co.	33-18- 1	1,570	fishing
Carr, O. K., No. 1 Capistrano, San Diego Co.	13- 6- 8	5,250	suspended
Oklahoma Oil Corp., No. 1 Palma, San Diego Co.	25-11- 3	510	redrilling

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Western Gulf, No. 1 Santa Maria, Santa Barbara Co.	5- 9-35	7,790	br. sh. drilling
Midwest Oil Co., No. 1 Los Alamos, Santa Barbara Co.	2- 7-35	3,450	suspended
Ohio Oil Co., No. 1 Goleta, Santa Barbara Co.	16- 4-28	4,782	cemented
General Pet., No. 1 Goleta, Santa Barbara Co.	21- 4-28	4,533	gas—shut in
General Pet., No. 2 Goleta, Santa Barbara Co.	21- 4-28	4,350	gas—shut in
General Pet., No. 3 Goleta, Santa Barbara Co.	21- 4-28	6,912	plug 6,696 ft.
General Pet., No. 133 Goleta, Santa Barbara Co.	21- 4-28	2,030	suspended
General Pet., No. 134 Goleta, Santa Barbara Co.	21- 4-28	2,053	suspended
General Pet., No. 136 Goleta, Santa Barbara Co.	21- 4-28	2,047	suspended
General Pet., No. 137 Goleta, Santa Barbara Co.	21- 4-28	2,050	suspended
General Pet., No. 138 Goleta, Santa Barbara Co.	21- 4-28	4,931	suspended
General Pet., No. 139 Goleta, Santa Barbara Co.	21- 4-28	2,051	suspended
Bowles Oil Co., No. 140 Goleta, Santa Barbara Co.	21- 4-28	2,065	suspended
U. S. Pet., No. 141 Goleta, Santa Barbara Co.	20- 4-28	2,004	suspended
U. S. Pet., No. 142 Goleta, Santa Barbara Co.	20- 4-28	2,012	suspended
U. S. Pet., No. 143 Goleta, Santa Barbara Co.	20- 4-28	2,010	suspended
El Camino, No. 149 Goleta Tideland, Santa Barbara Co.	22- 4-28	2,010	suspended
Bellview Oil Co., No. 159 Goleta, Santa Barbara Co.	24- 4-29	2,099	suspended
Cochran, J. H., No. 1 Naples, Santa Barbara Co.	7- 4-29	5,134	suspended
Strickland & Tippett, No. 1-A Goleta, Santa Barbara Co.	19- 4-27	4,886	suspended
Sovereign Oil Co., No. 1 Guadalupe, Santa Barbara Co.	20-10-35	5,500	suspended
Pacific Western, No. 1 Gibraltar, Santa Barbara Co.	14- 5-27	2,345	suspended
Associated, No. 1 Rincon Creek, Ventura Co.	19- 4-24	2,080	suspended
Continental, No. 1 Rincon Creek, Ventura Co.	23- 3-24	6,640	fishing
Bell, H. H., No. 1 South Mountain, Ventura Co.	22- 3-21	930	sd. sh. drilling
Pure Oil Co., No. 1 S. F. Canyon, Ventura Co.	15- 4-21	2,591	suspended
San Pedro Oil Co., No. 2 Sespe, Ventura Co.	13- 4-21	3,575	reaming
Magu Synd., No. 1 Oxnard, Ventura Co.	17- 1-21	5,115	hd. sd. drilling
Mex Cal Oil Co., No. 1 Conejo, Ventura Co.	12- 1-20	240	suspended
Graham & Loftus, No. 1 Goose Lake, Kern Co.	20-27-22	3,695	sd. sh. drilling
Wilshire Oil Co., No. 1-A Buttonwillow, Kern Co.	7-29-24	7,000	suspended
Milham Expl. Co., No. 6 Buttonwillow, Kern Co.	8-28-23	3,455	cemented
Calif. Oil Producers, No. 2 McKittrick, Kern Co.	30-30-22	6,660	to abandon
Purman, T. H., No. 1 McKittrick, Kern Co.	22-29-21	501	suspended
Federal Drlg. Co., No. 1 Buena Vista, Kern Co.	20-31-24	5,367	suspended
General Pet., No. 1 Belridge, Kern Co.	30-28-21	7,050	br. sh. drilling
Wallace, K. C., No. 1 Belridge, Kern Co.	32-29-21	4,222	suspended
Rio Cal Pet., No. 1 Shale, Kern Co.	2-27-18	2,355	suspended
Wicker, Sy., No. 1 Arvin, Kern Co.	12-30-28	3,803	suspended
Shell, No. 1 Weed Patch, Kern Co.	29-30-29	5,910	suspended
Osborn, Colter, No. 1 Weed Patch, Kern Co.	15-30-29	3,465	suspended
Osborn, Colter, No. 2 Weed Patch, Kern Co.	15-30-29	2,000	testing
Mohawk Oil Co., No. 1 Weed Patch, Kern Co.	32-30-29	6,150	abandoned
Fullerton Oil Co., No. 1 Semitropic, Kern Co.	21-27-23	....	core hole
Standard, No. 1 Devils Den, Kern Co.	14-25-18	1,600	suspended
Cumberland Oil Co., No. 2 Devils Den, Kern Co.	21-26-18	2,950	br. sh. drilling
Signal Oil Co., No. 1 Blackwell Corner, Kern Co.	15-26-19	106	tech. spud
United Kern Pet., No. 1 Mojave, Kern Co.	26-10-14	1,065	suspended
Meridian Oil Co., No. 1 Mojave, Kern Co.	11- 9-15	3,895	hd. sd. drilling
Kendall Dev. Co., No. 1 Mojave, Kern Co.	27-11- 9	764	hd. sd. drilling
Harding, J. B., No. 1 Mojave, Kern Co.	5-10-10	1,030	redrilling
Ritchie, J. J., No. 1 Tejon, Kern Co.	33-11-19	6,025	suspended
Associated, No. 1 Jacalitos, Fresno Co.	22-21-15	6,197	suspended
Panorama Oil Co., No. 1 Carrizo, San Luis Obispo Co.	7-31-21	4,019	suspended
Kent & McDonald, No. 1 Carrizo, San Luis Obispo Co.	3-32-22	2,200	br. sh. drilling
Trav-El Oil Co., No. 1 Carrizo, San Luis Obispo Co.	7-32-22	2,450	cleaning out
Paso Robles Synd., No. 1 Paso Robles, San Luis Obispo Co.	34-27-11	4,040	suspended
Cent. Coast Inv. Co., No. 1 Atascardero, San Luis Obispo Co.	1-28-12	425	sd. sh. drilling
Schilling, C., No. 1 Atascadero, San Luis Obispo Co.	24-28-12	1,475	suspended
Pacific Inland, well No. 1, Monterey Co.	19-23-15	1,345	sidetracking
Brown, W. F., No. 1 Parkfield, Monterey Co.	15-23-14	1,051	suspended
Guess, W. G., No. 1 Monocline, King Co.	7-21-21	4,620	resume work
Lacal Gas Co., No. 1 Dudley Ridge, Kings Co.	32-22-20	rig	suspended
Irma Inv. Co., No. 1 Dudley Ridge, Kings Co.	7-23-20	1,345	gas well—idle
O'Donnell, J. E., No. 1 Dudley Ridge, Kings Co.	7-23-20	1,635	gas well—idle
Eagle Oil Co., No. 1 Dudley Ridge, Kings Co.	15-23-20	rig	suspended
Kettleman Lakeview, No. 1-A Dudley Ridge, Kings Co.	20-23-20	1,170	gas well—idle
Valley Expl. Co., No. 1 Dudley Ridge, Kings Co.	12-23-19	1,287	redrilling
Valley Expl. Co., No. 2 Dudley Ridge, Kings Co.	12-23-19	1,090	sd. sh. drilling
Knudsen & Schmidt, No. 1 Reef Ridge, Kings Co.	36-23-17	4,315	recemented
Seymour, L. W., No. 1 Avenal, Kings Co.	10-23-16	1,148	suspended
Twin State Oil Co., No. 1 Point Arena, Mendocino Co.	14-12-17	7,700	hd. sd. drilling
Orinda Pet., well No. 1, Contra Costa Co.	32- 1- 3	2,120	suspended
Tulaco Oil Co., No. 1 Corcoran, Tulare Co.	17-22-22	....	material
Ducor Pet., No. 1 Ducor, Tulare Co.	14-24-27	2,200	suspended
Inland Valley Oil Co., No. 1 Visalia, Tulare Co.	24-17-24	2,092	suspended
Ellis & Stanford, No. 1 Tulare Lake, Tulare Co.	20-24-23	1,906	sd. sh. drilling
Colusa Oil Co., No. 1 Bush, Colusa Co.	31-15- 4	965	hd. sd. drilling
Oakdale Oil Co., No. 1 Oakdale, Stanislaus Co.	3- 2-10	4,202	hd. sd. drilling
Orland Oil Synd., No. 1 Orland, Tehama Co.	31-23- 3	3,040	suspended

COMPLETE BANKING SERVICE



Take a Tip from Mr. D.....

For years, Mr. D..... had intended to make his will and arrange to have our Trust Department act as executor. He knew it was the wise move . . . he had come to that conclusion after many nights spent in considering what would happen to his family if he were no longer with them. There were other nights when he tossed at the thought that no one would know what to do about his investments. On following mornings, over coffee and orange juice he made mental notes to reserve the afternoon for interviewing his attorney and our Trust Officer. But it took the sudden death of a friend to shock him out of the lethargy sufficiently to take action. Then Mr. D..... made a really iron-clad resolution . . . to file a correctly drawn will and ask us to act as executor. Now he is enjoying placid calm in the assurance that his family's welfare will be guarded . . . his business interests pursued . . . his wishes along all phases faithfully carried out.

We suggest that you take a tip from Mr. D..... Have your attorney draw your will at once naming the Exchange Trust Company as Executor and Trustee.

TRUST DEPARTMENT

EXCHANGE BANKS OF TULSA

The Exchange National Bank ❖ Exchange Trust Company ❖ Exchange National Company

Fourteen Completions in Central Ohio

Stark County Most Active In Development in Field. Gas Pay in Deeper Wells Attracting Large Operating Concerns

By George A. Whitney
Staff Correspondent, Central West Fields

FINDLAY, Ohio, Oct. 26. — During September the Lima Field oil handled by the Buckeye Pipe Line Co. amounted to 82,263.82 bbls., an increase over the runs for August of 11,593.89 bbls. A strong attempt is being made to extend the field in most all directions from production. The Lake Shore & Southwestern Oil & Gas Co. is testing new territory, near Grand Rapids in Wood County, near Malinta, McClure and Holgate in Henry County, and as far south as Logan County, where the company recently drilled in a gas well on the Robert S. Patterson farm, Section 6, Washington Township, where shallow gas was found between 760 and 767 feet that showed 135,000 feet, but was drilled to 1,376 feet, without much improvement.

In Richland Township, Logan County, Simms Oil Co. drilled a test on the Steve O. Ammons farm, in Lot 10,503, which showed 22,000 feet from 1,367-73 feet.

Wyandot County

R. W. Kurt and others' second test on the Anna L. Sherman farm, Section 2, Bridge Township, Wyandot County, is reported good for 221,000 feet of gas from the Trenton lime from 1,350 to 1,406 feet. McPharon and others' test on the Bowman-Billhart farm, Section 21, Tymochtee Township, same county, struck top of Trenton lime. In case this well comes in for commercial oil or gas it will extend slightly the present producing area in that part of the county. O'Neil and others are nearing sand on the Jacob Fruth farm, Section 7, same township, while Temple and Kennedy are drilling near sand at No. 1 Flaxenhead farm, same township. O'Neil and others are getting close to the Trenton on the John Neiderkoker farm, Section 1, Crawford Township, same county.

Unknown parties are drilling on the William Sangbush farm, about 6 miles east of Cloverdale and between Cloverdale and Crosswell, west of Ottawa, the county seat of Putnam County, northeast of Delphos.

Lake Shore Oil & Gas Co. is drilling on the L. M. Jones farm, Section 5, Richfield Township, Henry County. One of the best of this company's gas wells was found in the vicinity of New Bavaria, southwest of Holgate. With gas being found in Henry County in several spots and the numerous gas wells found in the Payne-Antwerp area of Paulding County, it looks like Defiance County should soon fall in line and make a few tests for gas.

CENTRAL OHIO

Fourteen completions were reported from the Central Ohio Field proper, also two additional wells in Meigs County, making a total of 16 completions, 2 being producers with an initial of 55 bbls., 4 dry holes and 10 gas wells.

In Ashland County no completions were recorded, the only change being a location made by the Commonwealth Gas Corp. for a test on the C. C. Good farm, Section 32, Jackson Township.

In Lorain County, the Ohio Fuel Gas Co. has a light gas well in No. 2-5,564 on the Arthur D. Crocker farm, Lot 90, Columbia Township. McMillan and others are drilling No. 3 William M. Klooz farm, Lot 77, same township.

In Medina County, Chatham Township, Edson Sons Co.'s No. 29 Marcus A. Frank farm, Section 20, produced an initial of 45 bbls. from 401 to 489 feet. Same company drilled in a dry hole finding no Berea sand, in No. 21 George W. Packard No. 1 farm, Section 4, same township. Preston Oil Co. is drilling No. 19 C. and E. Clapp farm, Section 5, same township.

In Wayne County, Chester Township, Harmon & George have a light showing of gas in No. 3 on the Thomas Arnold farm, Section 11, in the Clinton lime formation from 2,948-56 feet.

In Coshocton County, Newcastle Township, Hulse-Kundtz, Inc., made a location for No. 3 on the French G. Allen farm.

In Muskingum County, the Atha Co. shut down its second test on the Stark Land Co. farm, Section 10, Washington Township, at a depth of 4,174 feet, and finding no pay commercially, it drops into the duster class. The Pure Oil Co.'s test on the Walter E. Helriggle farm, Section 9, Brush Creek Township, is a very fair gas well in the Clinton lime from 4,119-59 feet.

Athens County

In Athens County, the Nelsonville Gas Co. has a rig on the John Ward farm, Section 5, York Township. Ohio Fuel Gas Co. reports a dry hole in No. 2-5,565 on the Charles Cole farm, Sections 34-35, Troy Township.

Stark County, the most active development county in the Central Ohio Field, where the gas pay sand is found at rather a great depth, is attracting attention of the large gas operating concerns in that part of the state. In Jackson Township, of this county, the Ohio Fuel Gas Co. brought in two wells during the week in No. 1-5,545 and No. 2-5,546 on the Bruce Crissinger farm, Section 16, both being gas producers. Same company reports a dry hole in No. 1-5,537 on the P. J. Bricker farm, Section 7, and is now drilling No. 2-5,583 on the same farm. Medford Oil & Gas Co. drilled in a gas well in No. 1 W. and D. Froman farm, Section 23, same township, in the Clinton lime from 4,365-82 feet. Brendall and others' No. 2 William A. Haymaker farm, also in Section 23, is a gas well in the same formation from 4,353-65 feet. East Ohio Gas Co. is drilling Nos. 2 and 3 T. K. Harris farm, Section 26, and has made locations for Nos. 1 and 2 Earl Johnson farm, Section 15, as well as driving a stake for No. 2 on the John Strouble farm, Section 23, all in Jackson Township, Stark County.

In Fairfield County, Richland Township, Westerman Brothers are drilling a test on the S. and M. E. Miller farm, Section 29.

In Knox County, Union Township, Hulse-Kundtz, Inc., brought in a gas well in No. 4 J. H. Colopy farm, Section 22, in the shallow sand from 625 to 629 feet.

In Guernsey County, Wheeling Township, Keith Brothers' test on the William T. Virtue farm, Section 12, produced 10 bbls. initially after given a shot to a total depth of 3,415 feet.

In Carroll County, Orange Township, Turner and others are drilling on the John H. Scott farm, Section 29.

In Meigs County, Bedford Township, the Ohio Fuel Gas Co.'s No. 1-5,571 on the R. E. Douglass farm, Section 12, is a nice gas well in the Keener sand at a total depth of 1,230 feet. Utsinger & Barton's test on the William Plummer farm, Section 8, Rutland Township, same county, is a light gas well at a total depth of 810 feet in the Macksburg sand.

Two additional completions were reported, the Oko Oil & Gas Co.'s No. 3 on the Kate Fetzer property, Section 1, Cnatham Township, Medina County, which showed an initial of 5 bbls. from the Cow Run sand at 470 feet, and the Ohio Fuel Gas Co.'s test on the Phasa Throckmorton farm, Section 4, Knox Township, Vinton County, at Bollins Mill, a fair gas producer in the Berea grit at a depth of 1,076 feet.

INDIANA

Only one completion was reported from Indiana, a test by the Indiana Southwestern Gas Corp., in the northwest corner of the J. Wesley Peed farm, NW Section 32, Clay Township, Pike County, which was a dry hole. Murphy Oil Co. abandoned its old No. 1 John D. Grimes farm, SW Section 14, Patoka Township, same county, being too light to pump.

Gem Oil Corp.'s No. 1 George W. Harper farm, NE Section 8, Barton Township, Gibson County, is too light to pump and has been abandoned.

Completion of the natural gas well being drilled by H. J. Hauck and others on the John Siddles farm, SW Section 4, Lincoln Township, Laporte County, near Mill Creek, is expected soon. Drilling operations are now through the hardest kind of rock or granite. An analysis of samples from the well to a depth of 680 feet looks encouraging, according to reports. Cuttings, or samples of every 5 feet drilled are being sent to the state geologist for analysis. Since the syndicate in charge of the drilling began operations last summer it is reported that an oil company has leased 8,000 acres of land north and east of Mill Creek. The well, in which a number of South Bend, Laporte, Michigan City, Fort Wayne, Chicago, Benton Harbor, Niles, Berrien Springs and St. Joseph, Michigan residents have an interest, is 16 miles southwest of South Bend.

ILLINOIS

Only two completions were reported from the Illinois Fields, both being in the Dupo Field in Sugar Loaf Township, St. Clair County, southeast of East St. Louis. Hans Wolf's No. 3 on the Oliver Anderline farm NE Section 33, produced an initial of 2 bbls. from 694 to 733 feet, and a dry hole was drilled by Ritter and others on the William Scheifler farm, in Survey 5, of Millstadt area, the total depth being 1,150 feet.

Dupo Oil & Development Co. abandoned No. 1 S. Jackson lot, in the town of Dupo, Section 21, Sugar Loaf Township, St. Clair County. C. C. Bundy and others abandoned four wells in the SE Section 21, which is in the townsite of Dupo. They are No. 1 on the Chaplain-Johnson lots; No. 1 E. C. Haskamer lot; No. 1 C. Baker lot and No. 1 Odd Fellows lot.

Most drilling wells in several different counties are not yet completed and are shut down.

KENTUCKY

Completions were scarce in the Kentucky Field, there being but three completions. S. A. Cobb and others' No. 4 in the southwest corner of the J. P. Howard 106 acres, in the Swope Pool, in Ohio County, produced an initial of 8 bbls. Unknown parties' No. 1 on the Jess Puckett farm, in the Logsdon Valley of Hart County, is reported at 50 bbls. initially, while No. 1 on the Roberts farm, southwest of production, is estimated at 30 bbls. initial.

MICHIGAN

Midland Field producers became overconfident recently and increased their production to such an extent that the Pure Oil Co. cut the price in that field from 73 cents per barrel to 55 cents per barrel. This 18-cent drop was accompanied by a proration schedule by the Pure which calls for a maximum per well production of 500 bbls. per day.

The lowest level ever reached in the Isabella-Midland Field for oil was 37 cents, several months ago, and the high point was attained at $1.70 in the early days of development. The Pure Oil Co.

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TWO OIL WELLS, EIGHT GAS WELLS AND TWO DRY HOLES IN THE EAST

By Staff Correspondent

PITTSBURGH, Pa., Oct. 26. — The number of completions reported from the three districts of the eastern fields represents about the lowest total in recent years. The West Virginia district reported four gassers, Southwest Pennsylvania has one and Southeast Ohio has three. The Ohio Field also has two oil wells with a total initial 24-hour production of 10 bbls. Southwest Pennsylvania and Southeast Ohio each reported one dry hole. The summary of the week's work is eight gassers, two oil wells and two dry holes.

SOUTHEAST OHIO

Keith Brothers have an 8-bbl. oil producer in their test operation on the R. T. Virtue farm in Section 12, Wheeling Township, Guernsey County. The production is from the Niagara Lime sand. In Chatham Township, Medina County, E. R. Edson & Son Co. brought in No. 29 on the Daniel Ross farm in Lot 7, Section 13, as a 2-bbl. producer from a depth of 435 feet.

In Licking County, the Wehrle Co. drilled a test on the C. F. Kreager farm in Lot 33, Hopewell Township, in the Lime Sand and has a gas well rated at 500,000 feet a day. In Section 8, Liberty Township, Washington County, Otto Heldman and others completed a test on the Henry Heft farm at a depth of 2,072 feet and in the Grit formation. There was no showing of oil but a pressure which indicates a gasser good for 50,000 feet a day. This well is about 1,500 feet northwest of the test on the Joseph Long farm. The Atha Oil Co. completed its No. 4 on the W. H. Atha farm in Falls Township, Muskingum County, in the Clinton Sand at a depth of 3,614 feet as a 500,000-foot gasser.

The O. K. O. Oil & Gas Co. found the sands on the Henry Essig farm on Lot 3, Section 13, Chatham Township, Medina County, dry after the drilling tools had been driven to a depth of 375 feet. This well is No. 48.

Drilling in Ohio

In Muskingum County, the test of the Ohio Fuel Gas Co. on the Staker heirs farm in Section 3, Brush Creek Township, is drilling at a depth of 2,900 feet. In Falls Township, the same operators have a test on the John Seibaugh farm down to 3,500 feet, and in Washington Township, Section 11, a test drilling on the H. A. Mangold farm at 3,970 feet will soon be in the sand. In the same township, the Atha Oil Co. has made a location on the Homer Bendure farm, Section 10. In Section 11, same township, the Mehowa Oil & Gas Co. has made a location on the J. A. Williams farm.

In Perry County, the Atha Oil Co. has reached 2,500 feet in the drilling of a test on the B. Lemasters farm, Section 16, Madison Township, and in Section 17, same township, the Mid-East Gas Co. has spudded in and started drilling on the E. Wilkins farm. In Hocking

(Continued on Page 65)

Personal Paragraphs About Oil Men

B. V. Emery of Tulsa is on a business trip to New York City.

* * *

K. R. Kingsbury, president of the Standard Oil Company of California, is in New York.

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S. P. Wallace, field superintendent for the Parkersburg Rig & Reel Company, Tulsa, is at present in the East Texas oil fields on special work.

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H. Neal Mallon of Bradford, Pa., president of the Dresser Manufacturing Company, who recently landed in New York from a sojourn in Europe, has returned home.

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Mr. and Mrs. Charles W. Ellison of Cushing, Okla., are spending a few days in San Angelo, Tex. Mr. Ellison is connected with the Cushing Oil & Refining Company.

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William Frank Boweser and Mrs. Dorthy Jane Fitzgerald of Fort Worth were married at San Antonio October 17. Mr. Boweser is scout for the Arkansas Natural Gas Co.

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John M. Crawford, president of the Parkersburg Rig & Reel Company, Parkersburg, W. Va., is making a trip through the Mid-Continent fields and was in Tulsa last week.

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I. W. Alcorn, with the Oil Well Supply Company, Tulsa, has recently returned from three weeks' visit to the company's main office and plant at Oil City, Pa.

* * *

W. E. Ramsey of the Ramsey Petroleum Company, who has been in Oklahoma for the past several weeks, is expected to return to Los Angeles within the next week or 10 days.

* * *

C. M. Nelson, a member of the Union Oil Company's personnel department since 1928, has been appointed assistant manager of the insurance and personnel department.

* * *

W. L. Standard, manager of general sales of the Union Oil Company of California, recently celebrated the occasion of his twentieth year of service with the Union.

* * *

E. L. DeGolyer, chairman of the board of the Amerada Petroleum Corporation, and Sidney Powers, chief geologist of the company, have been touring Colorado and eastern Utah, New Mexico and Texas.

* * *

H. W. Paltowsky, engineer with the Tropical Oil Company, a subsidiary of the International Petroleum Corporation, Ltd. (Canada), is in Tulsa after some time spent at the company's properties in the oil fields of Colombia, South America.

* * *

David Caldwell, chief engineer of the Barnsdall Oil Company of California, has been promoted to the position of assistant general superintendent, in which capacity he will be assistant to W. C. Whaley, vice president and general superintendent of operations.

* * *

J. E. Brantly, president of the Drilling & Exploration Company, Inc., 25 Broadway, New York, has returned from Canada where the company has been engaged in geophysical work and is now rigging up to drill a test for gas in the Three Rivers district, northeast of Montreal.

* * *

A. L. Henderson, formerly production foreman for the Mid-Kansas Oil & Gas Company in the Yates Pool, Pecos County, Texas, and in charge of drilling in the discovery well of that field, has been appointed general production superintendent in West Texas for the company, succeeding Charles R. Easterly who died about two months ago. Mr. Henderson has been with the company since 1919. His home is in Robinson, Ill.

W. L. Connelly of the Sinclair company left Monday on a business trip to Texas.

* * *

J. Dorian Curtin of the Mid-Continent Petroleum Corporation has returned to Tulsa from a trip through the Mid-Continent district.

* * *

W. A. Jackson, representative of Henry Vogt Machine Company, Louisville, Ky., is spending two weeks in Tulsa territory.

* * *

R. D. Gwynne of the Maloney Sales Corporation has been confined to his home in Tulsa with the influenza but is improving.

* * *

Jerry Murphy of the Indian Territory Illuminating Oil Company and J. Marston Linehan of the Prairie Pipe Line Company are taking a motor trip through the southern states to Florida.

* * *

George C. Schaeffer, vice president and sales manager, Blackmer Pump Company, Grand Rapids, Mich., called on trade in Tulsa with W. H. Sims, sales representative in this territory.

* * *

T. H. Bealls, assistant purchasing agent of the Empire Companies, Bartlesville, has been transferred to Chicago where he will act as assistant purchasing agent of the Continental Construction Company.

* * *

C. F. Camp, who accompanied a party on a big game hunt in the Jackson Hole territory in Wyoming, had his leg injured when the horse that he was riding down a mountain slope collided with a tree. He returned to Tulsa for treatment at the Sisler Hospital where he is still confined.

Men of the Industry

D. A. Little

D. A. Little was born in Corsicana, Tex., and received his education in the Corsicana public schools. After his graduation from high school he began work in the accounting department of the Magnolia Petroleum Company in March, 1914.

In 1923 Mr. Little was elected assistant treasurer of the company and in February, 1928, was transferred to the executive department. In March, 1929, he was elected a director and assistant general manager with headquarters in Dallas, Tex. In March, 1930, he was elected vice president, continuing assistant general manager.

F. A. Billstone, treasurer of the Ohio Oil Company, was a visitor in Tulsa last week.

* * *

A. Jacobsen, president of the Amerada Corporation, spent several days in Tulsa last week.

* * *

Ned B. Duff, Pure Oil Company, Fort Worth, Tex., spent a short time in Houston on business.

* * *

V. F. Neuhaus, independent oil operator, Houston, Tex., is recovering in the hospital from injuries suffered in a recent automobile accident.

* * *

J. P. Rogers, head of the land department of the United Gas Company, Houston, Tex., has been spending several days in Mississippi on business.

* * *

M. A. Finney, district superintendent of the Pure Oil Company in West Texas, has been transferred from Odessa to Van.

* * *

Henry Ford, field foreman of Mid-Continent Petroleum Corporation, has moved from Seminole to Konawa.

* * *

K. C. Heald, staff geologist of Gulf Oil Corporation and with headquarters in Pittsburgh, Pa., is a visitor in the Mid-Continent.

* * *

Burt E. Hull, president of the Texas Pipe Line Company, Houston, Tex., spent several days in New York City and other eastern points, making the trip by plane.

* * *

Don C. Payne, oil scout in Greater Seminole area for the Prairie Oil & Gas Company, has returned to his headquarters at Shawnee after spending a vacation at Marietta, in southern Ohio.

* * *

J. O. Campbell, formerly Tulsa representative of the Butler Manufacturing Company, has been transferred to Nebraska and W. E. Botz is now representing the company in Oklahoma.

* * *

L. G. E. Bignell, petroleum engineering editor of The Oil and Gas Journal, was called to Denver, Colo., by the death of his father, George Bignell. The funeral was held Saturday.

* * *

Dana Hogan, of Los Angeles, Calif., has joined J. Elmer Thomas, of Fort Worth, Tex., for an extensive automobile tour of Europe. After inspecting the oil fields of Germany and Italy they plan to visit Czecho-Slovakia, Austria and Hungary, returning to America before the holidays.

* * *

F. K. Haskell, vice president, and A. N. Horn, superintendent, of the Empire Pipe Line Company, Bartlesville, Okla., have just completed an inspection trip over the recently completed Texas Empire Pipe Line Co. of Texas pipe line from East Texas to Port Arthur and spent a short time in Houston, Tex. Mr. Haskell also is a vice president and general manager of the latter company.

* * *

Officials of subsidiary pipe line companies of the Standard Oil Company (New Jersey) have completed an inspection trip of oil fields in Texas, Oklahoma and Louisiana, having visited pipe lines and stations of their own and different companies operating in this southwestern district. Among the party were: F. Ray McGrew, president of the Standard Pipe Line Company, Inc., and S. W. Day, vice president and superintendent of the same company; R. V. Hanrahan, president, and J. A. Neath, vice president and general superintendent, of the Humble Pipe Line Company; E. H. Leroux, president of the Oklahoma Pipe Line Company; Robert Sparrowhawk, superintendent, and Paul Griffin, treasurer, of that company; Richardson Pratt, director of the Standard Oil Company (New Jersey), New York; Harry Wheatley and Mr. Toll of the Imperial Pipe Line Company, Ltd., Canada, and W. E. Beckner, master mechanic of the Tuscarora Oil Company, Ltd.

Natural Gas Industry Developments

Governor Bilbo for Distribution by State Of Mississippi Gas

JACKSON, Miss., Oct. 26.—State-owned distribution of the natural gas resources of Mississippi was demanded of the emergency relief session of the Mississippi legislature by Gov. T. G. Bilbo through passage of a bill creating a conservation and public utility commission.

"Municipal or regional ownership works more successful in the distribution of natural gas than any other form of utility service," the governor said.

Governor Bilbo said the first step looking to state distribution of natural gas was in the creation of a conservation commission.

"Then," he said, "Mississippians, if permitted to organize regional public utility corporations, can transmit this gas to a large part of the rural sections and to the gateway of every city in the state and thereby furnish heat and fuel for every home within these districts at a price cheaper than they can hire an illiterate Ethiopian to go out into their own forests and chop their own wood and put it on their own fire places."

"Mississippi owns practically one-fourth of the proven territory of the Jackson gas field which is enough to put a flame upon the hearth-stone of every home in the commonwealth maintained unextinguished for five years," the governor said.

TEXAS COMMISSION HAS FUND FOR GAS PROBE

AUSTIN, Tex., Oct. 26.—The Railroad Commission has $70,000 available to make an immediate start in its investigation of the gas companies of Texas under an opinion given Wednesday by Assistant Attorney General Fred Upchurch, and may use that full sum before December 31, next. Before the new law was enacted the calendar year limit was $20,000. The last legislature raised it to $70,000, following protests from over the state of excessive gas rates and demanding relief before the winter's cold weather increased the gas consumption.

There is now pending as the first compliance by the commission the letting of a contract to value the properties of the Lone Star Gas Co., the figures to be used as basis in rate making with the expectation of producing reductions. This evaluation contract may be let when all three members of the commission are in Austin.

When this calendar year has expired the commission will have $70,000 to spend in its gas utility division and investigations during the ensuing calendar year of 1932. This is the effect of the Upchurch opinion and enables the commission to proceed at once with its study of gas rates.

BARRINGTON NATURAL GAS

ALBANY, N. Y., Oct. 26.—The Barrington Natural Gas Corp., Waterloo, has been chartered at Albany, with $500,000 capital, to operate oil and gas wells, etc. Alice F. Farrell, 34 Chestnut Street, and Luella W. Frank, 123 Elisha Street, Waterloo, and Dayle D. Hall, 78 Camden Street, Buffalo, are directors and subscribers.

NATURAL GAS PIPE LINE MAP

A limited number of copies of The Oil and Gas Journal's map of natural gas lines is still available. The price of the map is $1 each, postpaid.

NATURAL GAS AND OIL MEN OF CANADA MEET

By Victor Lauriston

CHATHAM, Ontario, Oct. 24.—The thirteenth annual convention of the Natural Gas and Petroleum Association of Canada, held at the Prince Edward Hotel at Windsor on October 23, was marked by an attendance only a little short of the record year. Upwards of 160 delegates were registered.

The outstanding feature of the morning business session was the election of Major E. Sweet as president in succession to C. E. Steele, who had occupied the position since the association was formed in June, 1919. Mr. Steele was named as honorary president, in recognition of his long and valued service to the association and the industry.

The full slate of officers, which involved no other changes, was as follows: Honorary president, C. E. Steele, Port Colborne; president, Major E. Sweet, Brantford; first vice president, S. B. Severson, Dominion Natural Gas Co., Buffalo, N. Y.; second vice president, J. A. Richie, Dominion Natural Gas Co., Buffalo; secretary-treasurer, S. A. Morse, Union Gas Co., Chatham; assistant secretary and assistant treasurer, Joseph McKee, Union Gas Co., Chatham. Board of directors: J. B. McNary, Hamilton; Gordon D. Wickett, Windsor; J. A. McNevin, Chatham; Jacob Kohler, Cayuga; George H. Smith, Port Colborne. As past president, C. E. Steele is also a member of the board.

The financial report, presented by Assistant Treasurer Joseph McKee and verified by Auditors McNary and Richie, showed a cash balance of $1,286.82 and a membership of 156.

Prior to the election of officers, Major Sweet presented the annual report of the board of directors. In his report for the laws and legislation committee, Major Sweet outlined legislation affecting the natural gas industry. This included the repeal of a clause in the conservation act which prohibited the natural gas referee in rate-fixing from allowing a service charge, and opened the way for a sounder rate basis. Legislation had also given the minister of mines greater control over the industry, and any company securing a franchise or undertaking to sell gas in competition with an existing company had first to secure the approval of the minister, who could also prevent the sale of gas at rates considered inimical to conservation.

Major Sweet took the chair at the afternoon session when the retiring president, C. E. Steele, in his farewell address, reviewed the progress of the association and the industry in the 13 years since the organization was formed, and stressed the importance of a good understanding between the industry and the public.

"Geophysical Research Work" was interestingly discussed in a paper presented by John R. Reeves, general manager and geologist of the Penn-York Gas Co.

"Sales Methods for Storage Water Heaters," presented by Ralph Hartsell, advertising manager of the Dominion Natural Gas Co., discussed the methods used by the company this summer in a very successful 54-day selling campaign conducted in its Canadian territory.

Following the papers, Vice President S. B. Severson conducted an interesting questionnaire on practical gas problems including leakage survey, curb boxes, business possibilities of the meter reader's contacts with customers, accident prevention and the use of cast iron vs. wrought iron and steel pipe. Those presenting papers included Frank D. Howell, Brantford Gas Co.; R. M. Shanks, M. W. Moses, L. F. Near, T. E. Bassett and L. A. Coste, Union Gas Co.; Charles Henderson, T. E. Neely and W. H. Huff, Dominion Natural Gas Co. and Earl Howard of the Provincial Natural Gas Co.

It was decided to hold the 1932 convention at Hamilton.

LONE STAR RETURNED TO OKLAHOMA COURT

DENVER, Colo., Oct. 24.—Judge Robert E. Lewis of the United States circuit court of appeals today decided the federal court has no jurisdiction in the legal fight of the State of Oklahoma and the Lone Star Gas Corp. and allied concerns.

Judge Lewis ordered the case remanded to the Oklahoma state court for trial, upholding the contention of Gov. W. H. Murray that it is a state and not a government matter.

A private attorney in the name of Governor Murray recently brought suit against the Lone Star Gas Corp., which is incorporated in Texas, charging that concern and four allied corporations were defrauding the State of taxes and making false reports of their valuations.

The junior companies are the Lone Star Gas Co., the Community Natural Gas Co., the Meridian Gas Co. and the Guthrie Gas Service Co.

Attorneys for the corporation filed a motion to have the case tried in the federal court, claiming Oklahoma state courts had no jurisdiction in the matter. Governor Murray resisted the motion. Judge Lewis, sitting in the federal district court of Oklahoma, heard the evidence in the case several weeks ago.

The Lone Star Gas Corp. and its allied companies furnish natural gas to 27 Oklahoma municipalities.

The decision of Judge Robert E. Lewis of the federal circuit court of appeals that the United States court is without jurisdiction in the Lone Star Gas Corp. suit, returns to the Jefferson County district court at Waurika, Okla., Gov. W. H. Murray's battle to oust the corporation and allied companies from the State.

Murray's fight against the companies, which serve 26 cities in Oklahoma, started when he sought to compel them to lower rates to consumers. He alleged false reports to the State on valuation of properties and charged the State had been defrauded of taxes. In addition to seeking ouster of the companies, Murray has asked the state district court to place them in receivership.

Leon Hirsh, Oklahoma City attorney, was employed by the governor to assist Earl Pruet, Jefferson County attorney, in prosecuting the suit. Lone Star attorneys sought to transfer the case to the federal courts, but their motion was denied by District Judge Eugene Rice. Governor Murray issued a statement announcing he would lend Judge Rice the national guard to enforce his order keeping the litigation in the state court.

Lone Star counsel, however, applied to the federal court for the eastern district of Oklahoma at Muskogee for an injunction to restrain Hirsh and Pruet from acting. They alleged a conspiracy to destroy and confiscate the Lone Star properties. Pipe lines from Jefferson County, they said, supplied 750,000 Texas consumers.

Judge Lewis heard the federal court application. Meanwhile Judge Rice had set last Monday as a date for trial in state court. Judge Lewis advised Hirsh the federal court had exclusive jurisdiction until he decided on the Lone Star application. The Waurika hearing then was postponed indefinitely.

Hirsh said he would seek to have Judge Rice set the case for hearing at the earliest possible date.

NEW FRANCHISES FOR NORTHERN NATURAL GAS

The Peoples Natural Gas Co., which was organized last year as the distributing division of Northern Natural Gas, now operates in 12 eastern Nebraska towns and will soon begin operations in several other communities. The company is serving 1,823 customers. All of the towns with the exception of Fairbury are receiving gas service for the first time.

Many industrial installations have been made. The Peoples company is now rushing house heating installations before winter comes. The following distribution systems have been finished and natural gas service has started: In Nebraska; Auburn, Humboldt, Johnson, Pawnee City, Sterling, Tecumseh, Fairbury, Ashland, Elmwood, Louisville, Palmyra and Weeping Water.

Eighteen franchises were granted to cities and towns along Northern Natural Gas lines during September. Eleven were granted in southern Minnesota, six in Iowa and one in Nebraska.

The following towns granted franchises in Minnesota to the Peoples Natural Gas Co., the distributing division of Northern Natural: Emmons, Hartland, Hayfield, Le Sueur, Le Sueur Center, Belle Plaine, Elysan, New Prague, Farmington, Henderson and Chaska.

Columbus, Neb., granted a franchise to the Central West Public Service Co., present distributors of manufactured gas in the city.

Boxholm, Dayton, Harcourt and Gowrie granted franchises to the Iowa Gas Distributing Co., the Iowa distributing division of Northern Natural. Avoca, Iowa, granted a franchise to the Iowa-Nebraska Power & Light Co. and Duncombe granted a franchise to the Central States Electric Co.

SAN DIEGO SEEKING NATURAL GAS SUPPLY

SAN DIEGO, Calif., Oct. 24.—Upon the forthcoming report of L. J. Ready, gas engineer of San Francisco, may depend the policy of the city of San Diego as to a supply of natural gas for San Diego and its tributary territory. Mr. Ready has been retained by the city council to make a survey of the natural gas situation.

The city council has been pressing the San Diego Consolidated Gas & Electric Co. to get natural gas in place of the artificial product. The company has insisted that it is not feasible and has submitted its engineers' reports to prove it. The council decided to have an investigation of its own.

Meanwhile, Meeker and associates have begun a movement to drill at Camp Kearney with gas as their primary object, hoping they may get enough to solve San Diego's problem.

CITY SYSTEM PROPOSED FOR ELDORADO, KANSAS

ELDORADO, Kans., Oct. 26.—The natural gas situation in El Dorado advanced another step when the city commission entered into a contract with two companies to handle all the engineering work that may arise in connection with the city's move to obtain its own distribution system and natural gas supply.

The contract was made with the Burns & McDonnell Engineering Co. of Kansas City and the Emporia Engineering Co. of Emporia.

The city is now served by the Western Distributing Co. a Henry L. Doherty concern, which has been operating here for six years without a franchise.

Oil Industry Equipment and Supplies

LUNKENHEIMER PERFECTS HIGH-PRESSURE VALVES

The Lunkenheimer Co., Cincinnati, Ohio, has developed two new steel needle valves for high pressure gas or liquid service. These valves are designed to give accurate throttling and regulation at pressures up to 3,000 pounds at 150° F. The construction is exceptionally heavy with extra long pipe threads. The valves are used extensively on orifice meters for measuring gas and on other high pressure instrument lines. The valves are identical in design, with steel body, hub, stem, stuffing box nut and gland. Figure 1728 has bar steel body and is Parkerized. Figure 1730 is made of stainless steel and is intended for use in localities where corrosive fumes are present in the atmosphere. Both patterns are made in one-eighth, one-fourth, three-eighths, and one-half-inch sizes.

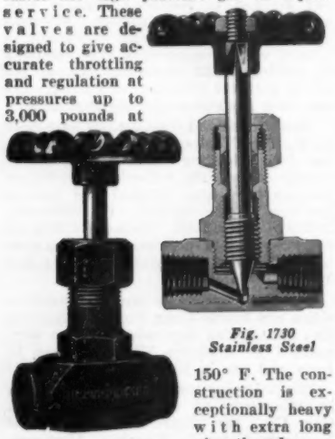


Fig. 1730 Stainless Steel

Fig. 1728 Carbon Steel, Parkerized

A copy of Booklet F-548 illustrating these valves will be sent upon request to the company.

TWO-SPEED WORM-GEAR REDUCER IS DEVELOPED

A two-speed worm-gear reduction unit, designed for either horizontal or vertical drives of one-eighth-horsepower and up where two speeds are required, has been introduced by Gears & Forgings, Inc., Cleveland, Ohio. This type of speed reducer is manufactured integral with motor or as a separate reduction unit, in speed reduction ratios ranging from 4:1 to 150:1.

The unit consists of a worm and worm gear and a set of differential gears, the driving shafts and their Timken roller bearings all enclosed in a leakproof and dustproof cast housing. The two speeds are obtained by means of the differential gearing. The high speed is obtained by moving the small hand lever to the right. This locks the differential to the low-speed shaft on which the worm gear and differential gearing rotate as one unit. Movement of the hand lever to the left locks the side gear of the differential preventing its rotation. Thus one-half of the revolutions of the worm gear are imparted to the slow-speed shaft. Change of output speed can be made while the unit is in operation under full load.

The worm gear is chilled nickel bronze; its shaft is S.A.E. 3145 steel. For the worm, which is forged integral with its shaft and hardened and ground, S.A.E. 2315 steel is used. All the gears in the differential are of heat-treated alloy steel.

The October-November issue of the Lufkin Line, published by the Lufkin Foundry & Machine Co., Lufkin, Tex., gives a comprehensive report of the fall meeting of the A.P.I. division of production, southwestern district, held in Lufkin.

AMONG THE EQUIPMENT HOUSES

M. C. Morris, formerly with the International Derrick & Equipment Co., has been appointed sales manager for the Hall & Lowery Iron Works, Inc., of Goose Creek, Tex., manufacturers of inside casing cutters, automatic casing spears and Stafix pumps.

E. R. Dougherty has joined the Amsco sales organization, and will work with E. F. Mitchell, district manager, in the engineering and sale of Fahralloy castings in Chicago and the surrounding territory.

The Lincoln Electric Co., Cleveland, Ohio, manufacturers of "Stable-Arc" welding equipment and "Linc-Weld" motors, has been appointed general industrial distributor for Blackor, an abrasion-resistant facing.

Consolidation of the George W. Moore Co. of Chicago, with H. W. Caldwell & Son Co., a subsidiary of Link-Belt Co., is announced by Alfred Kauffmann, president of Link-Belt. The combined units are to be known as the Caldwell-Moore Division, Link-Belt Co. Max H. Hurd, formerly president of the George W. Moore Co., becomes a vice president of Link-Belt, in charge of the Caldwell-Moore operations.

The Union Chain & Manufacturing Co., Sandusky, Ohio, has appointed C. H. Upson, 1012 Traction Building, Cincinnati, Ohio, representative in that territory.

The Chicago Pneumatic Tool Co. has removed its offices and service station in Seattle, Wash., from 1743 First Avenue South to 3201 First Avenue South and appointed C. Kirk Hillman as district manager. The larger quarters permit carrying a complete stock of repair parts as well as representative items of the company's products, which include air compressors, pneumatic tools, rock drills, electric tools, Diesel engines, etc.

E. N. Smith, formerly division sales manager for the National Supply Co. in Pittsburgh, Pa., has been appointed manager of sales of the Dayton Pipe Coupling Co., Dayton, Ohio. For the present he will continue to make his headquarters in Pittsburgh.

Harry L. Erlicher, who entered the employ of the General Electric Co. as an office boy in the purchasing department, has been appointed purchasing agent, succeeding L. G. Banker, who retired on October 1 after 43 years continuous service.

Highway building and maintenance equipment, including a fleet of 70 road patrols, recently ordered by the State of Pennsylvania, is to be powered by engines manufactured by the Hercules Motors Corp.

H. C. Williamson, formerly with the W-K-M Co., Houston, Tex., now is representing the Allsteel Products Manufacturing Co., Wichita, Kans. Most of his time will be spent in eastern territory.

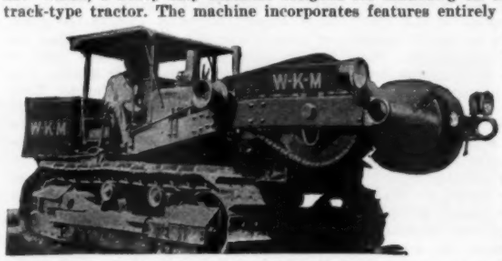
ACETITE NEW SULCO PRODUCT

The Sullivan Co., Memphis, Tenn., has perfected a new product, Acetite, for acid-proofing cement mortar joints, cement coatings, etc. Acetite is said by the manufacturer to be immune to sulphuric, muriatic, hydrochloric and other strong acid solutions and to find various applications in the oil industry. It is designed for the protection of all surfaces subjected to the corrosive effects of acids and chemicals. Metal, masonry, cement, steel, wood and stone—any rough surface—can be treated.

The October number of Acetylene Tips, published by the Linde Air Products Co., New York, contains an interesting article on the design and fabrication of oxweld headers.

W-K-M OIL FIELD WINCH INCORPORATES NEW FEATURES

The W-K-M Co., Inc., Houston, Tex., announces production and deliveries on a new winch, a heavy-duty machine designed for mounting on the Allis-Chalmers "50" track-type tractor. The machine incorporates features entirely new in oil field winch construction. Special care was taken to obviate the tendency to "nose dive" in rough going because of too much weight on the front end of the tractor. With a tubing line on the drum, the winch is designed so that normal center of gravity of the tractor is moved forward only 6½ inches. When mounted on the Allis-Chalmers "50" tractor, it does not interfere with normal oscillation of the tracks.



Winch drive is from a heavy power takeoff at the rear of the tractor to a 4-speed cotta transmission mounted opposite the driver's seat for convenient gear shifting. From the transmission, a heavy drive shaft fitted with Spicer universal joints carries the power forward to a heavy duty bevel gear, which transmits the power to the countershaft, located immediately in the rear of the drum. When extreme power is required, the single line pull of the machine may be doubled by reversing the sprockets on the power takeoff and the cotta transmission.

Change-over is said to require only 10 or 15 minutes, and the winch is designed to withstand all strains imposed by making the change. The winch is equipped with double catheads, one on each side of the countershaft. Brakes are self-energizing, fully equalized. The drum is mounted on Hyatt roller bearings, drum shaft being stationary. Details may be obtained on request from the company.

MEN KNOWN *in* THE EQUIPMENT FIELD

Alfred C. Fickes, for the last eight years general sales manager of the Lancaster Iron Works, Lancaster, Pa., and

Alfred C. Fickes

well known in steel plate fabricating lines, recently became associated with the Biggs Boiler Works Co., of Akron, Ohio, as sales manager.

Mr. Fickes was identified with the steel industry for many years, as a mechanical and structural engineer with the Philadelphia and Reading Coal & Iron Co., Lehigh Coal & Navigation Co., Southern Pipe Line Co., Bethlehem Steel Co., and McClintic-Marshall Construction Co., before entering the service of the Lancaster Iron Works in 1915 as chief engineer.

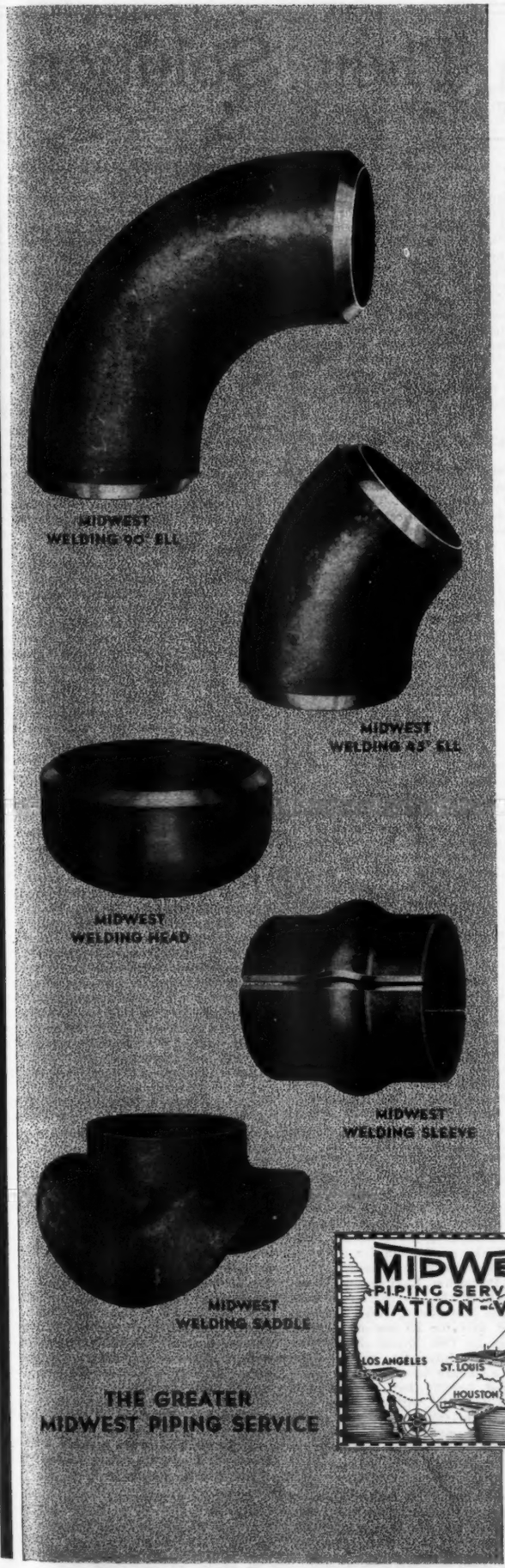
CROSBY GAUGE DESIGNED TO STAND HARD SERVICE

The Crosby heavy-duty all-steel gauge, style AIH, announced by the Crosby Steam Gauge & Valve Co., New York, is designed to give exceptional accuracy and long life on service where rapidly pulsating pressures and vibration ordinarily cause severe wear such as in high-pressure, high-temperature oil cracking; modern high-pressure steam stations, and synthetic chemical plants. It is unaffected by many chemicals and fumes which attack bronze, such as sulphur and ammonia.

The tubes are completely machined from a solid bar of special alloy steel. The machining includes precision boring and turning, absolutely concentric, and the threading of the heavy end sections. The tubes are rolled to shape and radius, heat-treated and tempered. All work is done under exact control.

The tube is attached to socket and tip by threads forming a mechanical joint which the manufacturer says will not fail should high-temperature fluid reach the tube. The bearings are of stainless steel hardened and polished.

The sector and pinion are wide faced and forged to give the tough core required to withstand the blow of extreme vibration and pulsation which will break hard brittle teeth. The teeth are machined then hardened and chromium plated to resist wear.



THE application of Midwest Welding Fittings to many types of piping systems means reduced costs and improved designs that were not previously possible.

Midwest Welding Ells, 90° and 45°. Dimensional accuracy and uniformity are exceptional. A special *compression* sizing operation finishes Ells to exact radius and sectional diameter and in perfect round. Tangents reduce the time and cost of installation.

Each Ell is made from *one piece* of plate by a special process developed and patented by Midwest; there is one welded longitudinal seam along the inner circumference. Final working of the metal is at welding heat and in *compression*, thus normalizing and refining the metal in the weld and the plate—it is not extruded or stretched.

Standard weight Ells stocked from 2″ to 16″ and extra heavy from 2″ to 12″.

Midwest Welding Head. The ellipsoidal form reduces unit stress in the metal to a minimum. The long tangent puts the circumferential weld to the pipe entirely in tension—it is not subjected to shear and bending. Application is much easier and a neat appearing job is assured.

Standard weight and extra heavy Heads carried in stock from 3″ to 24″.

Midwest Welding Sleeve. Used to reinforce a butt line weld between two pieces of pipe, it relieves the butt weld of any bending stress and much of the tensile stress to which it would otherwise be subjected. Transverse recess in sleeve permits its application over the conventional line weld.

Sleeves are carried in stock from 4″ to 24″.

Midwest Welding Saddle. It not only reinforces the junction of neck and body of a welded header, but also compensates for the weakening of header body that results from loss of the metal cut out for the neck opening. Tests proved this saddle materially increases the strength of a welded header over customary gusset plate construction.

Made in sizes from 4″ x 2″ to 24″ x 24″. Thickness varied to suit service requirements.

• • •

Midwest Welding Fittings are made from the same material as mild steel pipe—consequently, they have the same coefficient of expansion and the same welding characteristics. On special order, they will be made from genuine wrought iron or any of the standard alloys.

See Bulletin WF-2 for complete information.

MIDWEST PIPING & SUPPLY CO., Inc.

Main Office: 1450 South Second St.
St. Louis, Mo.

Offices: Chicago, 208 So. La Salle Street . . . Houston, 600 Bringhurst Street . . . Los Angeles, 520 Anderson Street . . . New York (Ballwood Div.), 30 Church Street . . . Tulsa, 733 Mayo Bldg.

Field Problems and Their Solution

EDITED BY THOMAS F. SMILEY

In order that men connected with the drilling, producing and transporting branches of the petroleum industry may procure quickly a solution of many problems confronting them from time to time in their work, The Oil and Gas Journal has arranged with leading engineers and other recognized authorities to answer questions submitted by readers of this publication pertaining to the work of drilling and producing crude oil and transporting this product.

Everyone is invited to submit questions freely. These questions will be submitted to proper authorities by Mr. Smiley, who edits the page, and answers, based on the best available information, will be published. Each question should give as much detail as possible, especially where it relates to matters where depths of sands, types of sands and operations on adjoining properties would have a bearing on the problem involved. The source of all questions will be considered as confidential and only initials will be published in connection with the question.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or practices which are improvements.

In case an immediate answer is important, one will be given by mail if the writer requests it.

INTERESTED IN TORPEDOES

I am interested in a new torpedo invented by a well shooter. Could you give me some information as to the well-shooting and firefighting business?—R. M. D.

Well-shooting and firefighting are a highly specialized business and limited to relatively few companies and individuals.

The most comprehensive article on this general subject that comes to mind was prepared by C. O. Rison, with the Indian Territory Illuminating Oil Co., Bartlesville, Okla., and presented before the annual meeting of the A.I.M.E. held in New York in February, 1929. It is entitled "Manufacture of Nitroglycerin and Use of High Explosives in Oil and Gas Wells." You probably can get a copy of this paper by addressing Mr. Rison.

You should obtain advice of value from Mr. Rison; M. M. Kinley, 826 East Admiral Boulevard, Tulsa; or Walter H. Jeffery, Second National Bank Building, Toledo, Ohio. Warren F. Bleecher, Boulder, Colo., is recognized as an authority on well shooting. He made a special study of torpedoes and you probably can obtain valuable assistance from him.

Firefighting with nitroglycerin is now limited to gas wells almost entirely because of difficulties that have been encountered in oil fires owing to the downward force of the explosion shattering casing in the well and leaving it in bad shape for future production.

In the August 13, 1931, issue of The Oil and Gas Journal there is an article about fires in East Texas that may interest you. Numerous other articles have appeared in The Oil and Gas Journal from time to time and it is suggested that you look through the semiannual indexes for reference to these articles.

EFFECT OF AGE ON CONCRETE

What is known, please, concerning the effect of time on concrete work, such as floorings, foundations for buildings, machinery, etc., sidewalks and general work about an oil lease? Is it more likely to wear away as it gets older? Are there any precautions that may be taken in doing the cement job in the first place that will increase its life?—E. G. E.

The strength of concrete under proper curing conditions increases with age. This increase in strength and ability to resist wear is rapid at first, but it continues at a slower rate for an indefinite period after that. Tests made at various intervals up to five years on concrete cured in a moist atmosphere have shown that the increase from the seventh day to the twenty-eighth is about equal to the increase from the sixth month to the end of the second year. The strength of concrete at 28 days commonly is taken as a standard of comparison.

Of perhaps greater importance than the effect of proper curing on strength is its effect on other qualities of concrete. Thorough curing is one of the most important elements in the production of watertight concrete. Building up the internal structure of the concrete through more complete hydration of the cement is one of the most effective and economical means of making it impervious to water. The necessity for proper curing of retaining walls, tanks and other concrete subject to hydrostatic pressure or severe weather conditions cannot be overestimated.

The resistance to abrasive action is increased in a similar manner, showing the importance of curing floors, pavements and other surfaces subject to such wear. Continuous damp curing, particularly in the early stages of hardening, aids in obtaining a hard, dense surface and in preventing checking and dusting. The moisture should be applied soon enough to prevent the surface from drying out and shrinking before the concrete has hardened.

Practically all concrete as mixed contains an excess of water over that required for hydration. The problem of curing, therefore, is essentially to prevent the evaporation of this water. In some cases the surface of the concrete is sealed with a compound applied immediately after it has set. This is effective where sealing of the surface without penetration is accomplished. Wet burlap, canvas, or straw coverings often are used with good results. The covering should be placed as soon as it can be done without marring the surface of the concrete and care should be taken to keep the covering continuously wet by frequent sprinkling. Since fresh concrete will not take up additional water, the concrete may be wetted down immediately after finishing, taking care to prevent surface cement from being washed out.

Floor finishes and all two-course work should receive careful attention as moisture is not only lost by evaporation but also some of the water from the finish layer is drawn out by the base course. Ponding is a good method of curing for flat horizontal surfaces, such as floors and pavements. With this method the surface to be cured is surrounded with small earthen dikes and then kept flooded with water for the desired period. Vertical surfaces are more difficult to cure but the effort is well worth while. They may be protected by leaving the forms in place as long as possible, or by hanging canvas or burlap over the surface and sprinkling. Exposed surfaces should be protected from drying out for at least seven days, and for a longer period when practicable.

In cold weather work it is important to protect the concrete from freezing and maintain it at a temperature where it can harden properly. It should be kept at a temperature above 50° F. for four or five days if possible and in no case less than 72 hours. This is usually accomplished by heating the aggregates and water before the concrete is mixed, covering the concrete, and heating with salamanders or steam.

For the foregoing advice this department is indebted to the Portland Cement Association, 33 West Grand Avenue, Chicago. It is suggested that you write to that organization for its booklet, "Design and Control of Concrete Mixtures," which you will find helpful.

LITERATURE ON GAUGING

Be kind enough to advise the writer how he may familiarize himself with the duties of an oil gauger. There must be some books on the subject or some place where one could learn how to perform the work of a gauger.—C. E. N.

This department does not know of any books that deal with the duties of a gauger. His duties are variable and depend upon the instructions given by the different purchasing companies. So far as information at hand goes, all companies employing men to check oil runs develop these men from their employes and give them instructions as to their duties.

The simplest way to get into this work would be to start as a lease worker and study the methods followed on the lease and then make application for advancement as opportunity is presented.

In the Petroleum Engineering Handbook, published by Petroleum World, 1031 South Broadway, Los Angeles, Calif., and sold for $5 per copy there are articles by Col. Ernest H. Wilcox that might be of interest to you, and the duties of a gauger in California fields are outlined briefly, but even if you were quite familiar with all those details it does not follow that you would be able to get employment as a gauger in any other field because methods do vary and each company has its own rules.

The general knowledge required can be gathered only by working in the fields and if you will start at the bottom with some oil company and work up you may be able in time to qualify for a gauger's position.

WHY WAS IT CALLED THAT?

DERRICK

The word "derrick" is traced to a seventeenth century hangman of Tyburn, near London, named Derrick. It is supposed trees served for the hangings at first. Derrick built a gallows which was dubbed the "three-legged mare" and "Tyburn tree." Thereafter such structures came to be known as derricks. Hare's "Walks in London" says: "The condemned were brought thither in a cart from Newgate, 'thief and parson in a Tyburn cart,' and the prisoner usually carried an immense nosegay, presented to him on the steps of St. Sepulchre's Church, and having later refreshed with a bowl of ale at St. Giles' the cart was driven underneath the gallows and the noose adjusted, after which the cart was quickly driven out from under the victim and he was left hanging.

ORIGIN OF SALT DOMES

You quoted Doctor Gould recently in connection with the likelihood of finding salt domes in Oklahoma. May I ask you what theory the geologists hold with reference to the origin of these domes? Have geophysical instruments been used in finding them? Have similar domes been found in European oil fields and are they just like those in this country? I believe important salt domes have been found in Louisiana within the last few years. Will you tell me the names of these domes, please?—Y. D. R.

Salt structures similar to those in the United States, but not precisely like them, have been discovered in Europe. The American salt domes seem to be most closely allied to the Hanoverian type of salt structure in Germany and it is supposed their origin is the same. It appears to be established that the Hanoverian domes resulted from the simpler types and are the outcome of a greater deformative pressure. So it is accepted that the American domes also are due to the plastic yielding of a salt mass under the influence of pressure.

E. DeGolyer, summarizing the theories regarding the origin of the American salt domes says the salt and anhydrite were deposited in lagoons of the pre-Cretacious age. Later the salt strata and the adjacent strata were folded, producing salt structures of the anticlinal ridge type. Then sediments of Cretacious, Tertiary and Recent ages were deposited upon them in normal succession and without deformation. During this time the salt structures continued to grow by punching through the anticlinal cover and also partly through the overlying blanket of sediments. In so doing they arched the strata at first, but later pushed the immediately overlying strata bodily through younger strata, lifting them thousands of feet in some cases. The conical form of almost circular cross-section assumed by the salt plug is explained as the form of easiest flow and least friction. The sediments adjacent to the core of salt were tilted away from the core into funnel-like structures. The cap rock is explained as due to solution of the top of the salt and the accumulation of the impurities, chiefly anhydrite, as a disc-like cap cover the salt. Later part of the anhydrite was changed to gypsum by hydration and this in turn was changed to limestone by reactions with circulating mineralized waters.

During the last five years, Dr. Walter A. Ver Wiebe says in his "Oil Fields in the United States," the search for salt domes has been prosecuted with physical instruments that were not available previously. A number of new domes are now known, the location of which formerly was unsuspected. The following domes have been discovered in Louisiana: Bayou de Glaise, Lutcher, Bayou Henry, Grasette, Bayou Blue, Napoleonville, Darrow and Sorrento. The last two are east of the Mississippi River. The first dome discovered by means of the seismograph was the Orchard Dome in Fort Bend County, Texas. The Long Point Dome in the same county was found by means of both the seismograph and the torsion balance. Many other domes have been found by the same methods.

SUBJECT TO A.P.I. STANDARDS

Is all crude oil when purchased by pipe lines on a gravity basis bought under A.P.I. gravity ruling?—M. R. R.

All crude purchased by pipe line companies on a gravity basis in the United States is subject to the A.P.I. standards. In fact these standards apply to all oil sold in this country except that for export.

Technical Questions Answered

BY CHARLES K. FRANCIS, PH.D., TECHNICAL EDITOR

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with the marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible so as to assure a satisfactory answer.

All inquiries should be signed and if other than the given initials are to be used please indicate the desired letters.

Questions involving patented processes, intricate formulas, and calculations and estimates of costs, for obvious reasons, cannot be answered. The replies will appear on this page within a reasonable time.

COST OF HYDROGEN FOR HYDROGENATION PROCESS

With reference to the hydrogenation process as applied to coal, is it true that the cost of the hydrogen alone prevents any commercial development of this process?—J. H. F.

The only information I have on this subject is based on a short article in the Oil News, August 7, 1931, page 123, which quotes a statement made by Prof. J. S. S. Brame in the London Times. A part of this statement indicates that the quantity of hydrogen required per ton of coal is 20,000 cubic feet, costing 22s per ton, or $5.28, and the yield of gasoline at 150 gallons to the ton, suggests a plant cost for the hydrogen of 3½ cents a gallon of gasoline produced. The following is a direct quotation from the Oil News:

With regard to Germany, experience there with bituminous coal has been very little; with brown coal Professor Donnan says that for several years 100,000 tons of petrol were produced annually. Today I am credibly informed the direct hydrogenation of coal is practically nonexistent. As your correspondent (August 1) pointed out, hydrogenation is being applied almost exclusively to the tars obtained by low-temperature carbonization.

There are important considerations which are vital to the commercial success of any hydrogenation process. In the first place no information has been made public of the capital cost, life, and depreciation of such plants in relation to the throughput of material a day, but they are unquestionably very high. The plant works at 2,500 to 3,000 pounds pressure per square inch and about 460 to 480° C. The fuel and oil paste has to be pressed in continuously and the hydrogen supplied under these high pressures. When Professor Donnan proposes a plant to treat 1,000 tons of coal a day has he any idea of the capital cost?

Further there is the cost of hydrogen, a difficult figure to arrive at. In the report of the Nitrogen Products Committee (1920, p. 245), it is stated that "under pre-war conditions by means of a process such as the water gas catalytic process it would amount to 2s. 6d. (60 cents), per 1,000 cubic feet delivered under compression." While hydrogen of such purity as here referred to would not be required, in post-war days it is very unlikely that a cost less than 1s. (24 cents) per 1,000 cubic feet can be assumed, even from the gases obtained in the process. As 10 cubic feet of hydrogen are required per pound of coal, the hydrogen cost would be over 22s. ($5.28), per ton of coal.

Fuel experts will be surprised to learn that each ton of coal would produce 60 per cent of its weight in petrol, approximately 150 gallons per ton, and would like to know whether this was from a bituminous coal and in a commercial plant; further, whether the figure of 7d. a gallon as the cost of production is inclusive of charges on capital, depreciation, etc., or merely production cost.

QUALITY OF EAST TEXAS CRUDE OIL

What is the general character of the East Texas oil and how does it rank as to lubricating oil contents?—C. R. G.

The oil produced in the East Texas Field is considered to be a high grade oil, yielding a large percentage of gasoline and a fine grade of lubricating oil may be made from it.

An analysis of a sample from Rush County, made under my direction, as published on this page April 23, 1931, showed the gravity of the crude oil to be 38.7 A.P.I., sulphur 0.12 per cent, and a gasoline content of 39.7 per cent (431 E.P.).

The Bureau of Mines, R.I. 3, 130, reports the examination of four samples from this field, all from the Woodbine sand and greenish black in color, as follows:

ANALYSES OILS FROM EAST TEXAS FIELD

Sample from—	Depth (ft.)	Gravity (A.P.I.)	Sulphur (%)	Gasoline yield (%)	Gravity (A.P.I.)
S.W. Extn. Joiner	3,688	39.4	0.30	37.1	60.8
Joiner	3,592	38.6	.28	35.8	60.2
Kilgore	3,652	40.0	.29	36.0	61.0
Longview	3,587	38.4	.26	35.0	59.5

The gasoline of the gravity shown should have an endpoint under 400° F. Further information, especially the properties of the lubricating fractions, are shown in summaries, reproduced in part as follows:

Approximate Summary of Products

S. W. Extension Joiner—	Yield pct.	A.P.I. grav.	Viscosity Say.Univ. at 100°F.
Light gasoline	14.5	73.9	.....
Total gasoline	37.1	60.8	.....
Kerosene	9.2	41.7	.....
Gas oil	14.2	35.8	.....
Nonvisc. lub. dist.	9.8	32.7/29.3	50/100
Medium lub. dist.	7.0	29.3/26.6	100/200
Viscous lub. dist.	....	....	Above 200
Residuum	22.0	16.5	.....
Joiner—			
Light gasoline	13.2	73.9	.....
Total gasoline	35.8	60.2	.....
Kerosene	9.7	41.7	.....
Gas oil	16.4	35.6	.....
Nonvisc. lub. dist.	10.1	32.7/28.8	50/100
Medium lub. dist.	5.6	28.8/26.4	100/200
Viscous lub. dist.	....	....	Above 200
Residuum	23.0	19.7	.....
Kilgore—			
Light gasoline	13.8	75.4	.....
Total gasoline	36.0	61.0	.....
Kerosene	9.1	41.7	.....
Gas oil	15.3	35.2	.....
Nonvisc. lub. dist.	8.6	32.3/29.3	50/100
Medium lub. dist.	6.4	29.3/27.1	100/200
Viscous lub. dist.	....	....	Above 200
Residuum	23.4	16.2	.....
Longview—			
Light gasoline	12.3	72.7	.....
Total gasoline	35.0	59.5	.....
Kerosene	10.2	41.9	.....
Gas oil	15.6	35.6	.....
Nonvisc. lub. dist.	10.2	33 0/29.3	50/100
Medium lub. dist.	5.9	29.3/27.0	100/200
Viscous lub. dist.	....	....	Above 200
Residuum	22.5	16.7	.....

The four samples of crude oil from the East Texas fields are all typical intermediate base crudes according to the classification given by Smith and Lane. The sample from the Joiner Field is from the discovery well, which came in October 3, 1930, at the rate of 400 bbls. a day. The quantity of sulphur is low, averaging 0.28 per cent. The yield of gasoline averages 36 per cent, kerosene 9.6 per cent, gas oil 15.1 per cent, nonviscous and medium lubricating distillate 15.9 per cent. The gas oil appears to be a good stock for cracking, and the lubricating fraction similar to the same range of distillates from the Burbank, Okla., crude, generally recognized as a high-grade lubricating stock.

SPECIFIC HEAT ABOVE CRITICAL POINT

The material below relating to specific heat data above the critical temperature is self-explanatory.—Editor.

I was somewhat surprised to see on the "Technical Questions Answered" page of the September 10 issue, the recommendation given for specific heat data above the critical point for petroleum oils and gases.

How well the Fortsch & Whitman formula is suited for determination of specific heats in this range may be judged by the following quoted from their paper printed in August, 1926, Ind. Eng. Chem.

"A third case is sometimes encountered in which liquid oils are heated under pressures well above their normal boiling points.

"The present data were all obtained at temperatures below the boiling point of the sample. At higher temperatures approaching the critical temperatures of the oils, the specific heats should be increasingly greater than would be predicted by Equation 4. Therefore, although Equation 4 may be applied as a fair approximation of the specific heats somewhat above the normal boiling point, its use cannot be recommended for temperatures within 100° F. of the critical point."

Any specific heat formula of the straight line type such as the Fortsch & Whitman is known to be quite inaccurate in a range near the critical where the specific heat at constant pressure reaches a maximum value which may approach an infinite value for an infinitesimal change of temperature at critical.

While there is but little data pertaining to the specific heats of oils near the critical, that given by Keenan on high pressure water and steam is of interest for comparison.

For temp. Range (°F.)	155	649	695	705	710	750
	159	662	705	*706.1	720	760
Specific heat	1.00	2.02	6.62	31.9	6.13	1.94

*(t_c).

Note—The specific heats above the critical temperature are at critical pressure. The other specific heats are for saturated liquid.

According to Cope, Lewis & Weber in August, 1931, Ind. Eng. Chem., there are no thermal data on the higher hydrocarbon vapors up to critical excepting for ethane.

I am sorry that the above criticism is mostly negative as it is very desirable to know more about the thermal properties of petroleum oils up to and above the critical.—H. E. R.

TESTING GASOLINE FOR QUALITY

We would be glad to have you suggest some simple tests which the city might use to aid in selecting suitable gasolines from dealers. There are now available several brands at as many prices and we are not selecting gasolines on a quality basis at the present time.—R. B. B.

Specifications and methods for testing gasoline are to be found in United States Bureau of Mines Technical Paper 323B, which may be obtained from the Superintendent of Documents, Washington, D. C., for 15 cents.

Many states and other purchasers have adopted the specifications shown in this bulletin for U. S. Motor gasoline. These may be briefly outlined as follows:

Corrosion test—A clean copper strip shall not show more than extremely slight discoloration when submerged in the gasoline for three hours at 122° F.

Distillation range—Recovery of 10 per cent at 167° F.; recovery of 50 per cent at 284° F.; recovery of 90 per cent at 392° F.; endpoint not above 437° F.

Sulphur—Not more than 0.1 per cent.

Vapor pressure—Not above 12 pounds. (Under some conditions 8 and 10 pounds).

It will be noted that the only simple test indicated is that for corrosion. The details of the testing methods are given in the bulletin. It is not advisable for an inexperienced person to endeavor to make these tests even if the required apparatus is available. When one is purchasing gasoline for quality it is a good plan to have a set of specifications to govern and then the shipment may be tested by an expert chemist.

A large part of the gasoline now marketed is better than U. S. Motor grade, a gasoline of about 60 A.P.I. gravity, initial below 100° F., and endpoint of under 400° F., leaving no acid on distillation, and the sulphur content below 0.05 per cent is widely distributed. Gasoline of this quality is often obtainable with an octane number of 60 and above, which is considered to be a fair knock rating.

FLASHPOINT LUCHAIRE

What is the meaning when the flashpoint of kerosene is quoted as "Flashpoint, Luchaire 72°"?—G. E.

The official method for testing the flashpoint of petroleum oils for use in the French Navy and other departments of the French government, requires the use of a particular apparatus known as the Luchaire Closed Tester. The apparatus is not so minutely described as the A.S.T.M. specifications for the official United States instrument, the Pensky-Martens Closed Tester, but the great difference appears to be in the fact that there is a fixed testing flame set in the path of the vapors escaping through a draft chimney from the oil being heated in a water bath (for low temperature flashes) under specified conditions. If the gases or vapors explode when coming in contact with the test flame the product is considered to be inflammable at the temperature indicated on the test thermometer.

When the sample of oil is heated to the temperature corresponding to the flashing point, the small test flame will be extinguished by the slight explosion in the upper part of the test cup, and this temperature is noted as the flashpoint. The average of three such determinations is reported as the flashpoint—Luchaire. The Centigrade scale is official in France, so 72° C. is equivalent to 129.6° F.

Detailed description of the Luchaire tester, and the method for using it, will be found in the Official Journal, October 28, 1925, Laboratory of the Department of Finance, Paris, France.

Caught While Scouting With The Journal's Cameras

1—E. O. Ray, oiler; T. H. Ligan, telegraph operator; J. H. Duncan, machinist; W. E. Bell, oiler, and S. J. Courington, relief chief engineer, Ajax Pipe Line Co., Afton, Okla. 2—Judge W. N. Stokes, counsel for the T. B. Slick interests. 3—O. E. Pearson, welder; George D. Simpson, engineer; J. A. Thornbrue, stillman; Deep Rock Oil Corp. gasoline plant, Mehan, Okla. 4—Ed Williams and G. H. Canterbury, Peden Co., Gladewater, Tex. 5—Beck Becktel, superintendent, Stanolind Oil & Gas Co., West Texas. 6—Mark G. Wilson, Texota Oil Corp.; Roy M. Sundby, and Jack H. Johnston, drilling contractor, all of El Dorado, Ark.

CENTRAL WEST FIELDS

(Continued from Page 49)

boosted the price of crude to 73 cents in the field in August despite lower prices in the western fields, and it was this increase in price that stimulated drilling in the new East Pool, in Greendale Township, Midland County, and the Vernon Pool, in Isabella County.

The Pure Oil Pipe Line Co. handles between 85 and 90 per cent of the crude produced in the Isabella-Midland Field. Most of the oil is shipped by lake tankers from Bay City to Toledo, Ohio, where a Pure Oil Co. refinery is located. The crude is conveyed from the field to Bay City by pipe line.

The Roosevelt Oil Co. refinery and the Peerless Pipe Line Co. are the other concerns handling the supply of crude in the field. The Roosevelt plant is running between 1,100 and 1,500 bbls. of crude a day.

Between 15 and 30 wells are drilling at the present time, and offset locations, lease and contract requirements will combine to force the drilling of additional wells.

Another gusher was added to the East Pool, Greendale Township, Midland County, when the Gordon Oil Co.'s No. 3 on the Noah Skinner farm, NE Section 16, showed an initial flow of 100 bbls. or better an hour and on the first 24-hour test was reported making 2,400 bbls. No. 4 on the same farm is nearing completion.

The Meridian Oil & Gas Co.'s No. 1 on the Woods farm, S half S half NE Section 21, Vernon Township, Isabella County, directly west of the Talbot Oil Co.'s No. 1 Woods farm, flowed 1,000 bbls. initial from the Dundee formation, but is reported to be drilled only partly into the sand. A heavier pay than that which the well is now producing from is believed a few feet below. However, the well probably will not be drilled deeper at this time as only 500 bbls. a day will be handled by the Pure Oil Co., which recently prorated wells to 500 bbls. a day. The Talbot Oil Co.'s No. 1 on the Woods 40 acres, S half S half NW Section 22, same township, just east of the Meridian Co.'s late completion on the Woods well, had an initial of 2,500 bbls. brought in during August, and still going strong.

Michigan had another well fire at the E. Brown Oil & Development Co.'s No. 1 on the Homer Campbell farm, NE NE Section 35, Vernon Township, Isabella County, a gas well recently drilled in, but oil workers extinguished the blaze by cutting the pipe with six shots from a high-powered rifle. The well showed a volume of 1,700,000 feet of gas.

FIELD NOTES

Apache Oil Co. is drilling No. 1 on the Frank Epple 117 acres, in Section 20, Denver Township, Isabella County.

Walter L. McClanahan is drilling his No. 2 on the A. J. Struble farm, SW SW, Section 10, Greendale Township, Midland County.

The Department of Conservation of Michigan reports issuing a permit to the Michigan Gas & Oil Corp., of Mount Pleasant, Mich., for No. 1 on the Daniel Coyne and others farm, in Section 18, Grant Township, Clare County. The location is in the center of the SE SE Section 18-17n-4w.

State Land Leases

The average price per acre of combined proven and wildcat state territory has been increased by bidders from 50 cents to $2.35, according to a tabulation made public by the land division of the State Conservation Department.

The department recently offered 15,811 acres, of which 4,291 acres were taken by oil operators and lease brokers. The various parcels brought cash payments of $10,117 into the state treasury.

Two adjoining 40-acre tracts in the Mount Pleasant Field close to production brought a high bid of $2,500. Robert L. Tope, of Mount Pleasant, was the successful bidder. Mr. Tope also obtained drilling rights on other state property in the area covering 1,322 acres. His total bid was $5,096, nearly half being paid for the 80-acre piece. Bidders are required to pay, in addition to the auction price, 50 cents per acre per year rental and one-eighth royalty on wildcat production and from one-eighth to one-fourth royalty on production in proven territories.

EASTERN FIELDS

(Continued from Page 49)

County, the Griffin Producing Co. has its second test on the J. W. Geiger farm in Falls-Gore Township down to a depth of 2,250 feet. In Carroll County the Home Company has started a test on the Scott heirs farm in Orange Township.

WEST VIRGINIA

Completions in the West Virginia Field were all gassers. The Chartiers Oil Co. brought in its No. 4 well on the G. D. Stump farm in Center district, Gilmer County, in the Injun Sand and at a depth of 1,779 feet. From this depth and formation the well is producing 1,250,000 feet of gas. In Jefferson district, Lincoln County, the Turtle Lick Gas Co. has a fair gasser in its test on the Alice Brumfield farm. This well was completed after the drilling tools had been sunk to a depth of 2,357 feet.

In Center district, Calhoun County, T. J. and A. H. Jackson brought in their second test on the T. J. Jackson farm as a light gasser natural from the Injun sand and a depth of 2,137 feet. The Madison Gas Co. has a light gasser in their second test on the Nelson Holton farm in McComas district, Cabell County, from a depth of 2,100 feet. This well will be drilled deeper.

Drilling in West Virginia

Frank Yates' test operation on his own property in Harts Creek district, Lincoln County, has been drilled to a depth of 1,810 feet. In Jefferson district, the Conley Gas Co.'s No. 4 is drilling at 745 feet on the W. M. Adkins, and in Union district, the second test on the Woodyal Gas Co. on the Thomas Burns farm has been sunk to a depth of 1,970 feet. In the same district the test operation of the Hamlin Natural Gas Co. on the Golza Bragg farm is now down to 900 feet, and the third well of the Martin Gas Co. on the Elisha Bias heirs farm in Sheridan district is drilling at 1,466 feet.

In Mingo County, the Ohio Southern Gas Co. has a rig standing on the Cowden and Workman lease in Harvey district, for a test. The United Fuel Gas Co. has part of the material on the ground for No. 4,324 located on the Central Trust Co. tract in Warfield district, and No. 4,328, belonging to the same operator and located on the same tract, is drilling at 2,815 feet. A road is being constructed to the location chosen for No. 4,329 of the same operator on the same tract. In Hardee district, the United Fuel Gas Co. has spudded in and has reached a depth of 70 feet in its well No. 4,331 located on the Cotiga Development Co. property.

The Manufacturers Light & Heat Co. has rigs standing for the purpose of drilling deeper its No. 1,572, located on the D. W. Stewart farm in Church district, Wetzel County, and for the deeper drilling of No. 3,300 on the W. P. Hubbard farm in Clay district. In Proctor district, Ray Hennen and others have constructed a rig on the Jesse Parson farm for a test well. The test operation of the Simwell Oil & Gas Co. on the W. J. Price farm in Grant district, is shut down with the tools in the hole at 3,053 feet.

A rig has been constructed by the Owens-Illinois Glass Co. on the Broun-Cochran farm in Peytonia district, Boone County, for No. 7. In Scott district, the Owens-Illinois Glass Co. has a rig constructed and part of the tools on the ground at the site of No. 21 on the Cassingham and others property, and the same is true for a second test on the S. M. Wheeler farm. The same operators have a rig standing on the Little Coal Land Co. tract in Washington district. The drilling tools have been sunk to a depth of 2,560 feet in the twelfth well of the Pond Fork Oil & Gas Co. on the Cole and Crane lease in the same district. Godfrey L. Cabot is drilling at 450 feet in his second test on the Central Trust Co. tract in Sherman district.

In Sherman district, Boone County, the Pure Oil Co. is drilling at 2,150 feet in No. 54 on the Federal Coal Co. tract, and at a depth of 781 feet in No. 55 on the same tract. On tract "A" of L. R. and P. the same operator has made a location for No. 42, and has constructed a rig on the Williams Coal Co. property for No. 256. The Owens-Illinois Glass Co. has constructed a rig on the Peytonia Coal Land Co. for No. 20, and has a rig constructed and part of the tools on the ground for the drilling of No. 21 on the same tract, in Sherman district. On the Federal Coal Co. tract in the same district, Godfrey L. Cabot has made a location for No. 31, and has a rig standing for No. 46. His No. 49 on the same tract is drilling at 1,670 feet and No. 50 stands at 1,699 feet, while No. 51 has been drilled down to a depth of 1,795 feet. The second test of Godfrey L. Cabot on the J. Q. Dickinson farm in Sherman district, has been drilled down 1,725 feet.

In Scott district, Boone County, the Turtle Lick Gas Co. is drilling at 1,210 feet in its second test on the Hettie Hill and others property. The Owens-Illinois Glass Co. has a fishing job on hand in its sixth well on the Powell heirs farm in Washington district, and at a depth of 2,288 feet. The Trace Creek Gas Co. is building a rig at the site of No. 5 on the J. Albert Covert farm in Washington district.

Winifrede Co. is drilling at a depth of 2,663 feet in No. 15 in Wrightsville in Cabin Creek district, Kanawha County. The same operator has made a location for No. 16 on the Bedford Trust Co. property in the same district. No. 17 of the Winfrede Co. on its own property in the same district is drilling at a depth of 2,150 feet. In Elk district, the same operator has made a location for No. 19, located on the G. W. Wentz farm, and No. 20 on the W. A. Bradford farm has been shut down for orders after the drilling tools had been sunk to a depth of 1,806 feet. In the same district, the Kendall Oil & Gas Co. has selected a location for No. 5 on the Frank J. Kendall, and in the same district, Grosscup and Schultz are drilling at a depth of 3,625 feet in their test operation on the Samuel M. Burdette farm.

The Ritezel Lucas property in McComas district, Cabell County, is the location of a test by the B. C. K. Gas Co. This well is drilling at a depth of 600 feet. The Washington Gas Co. is shut down in its test on the E. D. Fittro farm in Coal district, Harrison County, after the drilling tools had been sunk to a depth of 2,573 feet.

The Owens-Illinois Glass Co. has a rig standing for a test on the Joseph Orth farm in Grant district, Marion County, and the same is true on the C. and A. B. Williams farm in Liberty district, Marshall County. The owners of the rig are G. B. and A. G. Patterson. The Pedlar Run Oil Co. is shut down at its test on the Lewis R. Hess farm in Clay district, Monongalia County. In Battelle district, Eddy and Johnson have reached a depth of 100 feet in the drilling of their test on the Owen Hennen farm, and in the same district, the West Penn Gas Corp. has driven its drilling tools in its test on the Charlie Taylor farm to a depth of 1,550 feet.

SOUTHWEST PENNSYLVANIA

The completed operations reported from the Southwest Pennsylvania Field are both located in Washington County. Potts Brothers brought in their test on the A. Woodruff farm in Chartiers Township as a 500,000-foot gasser and from a depth of 1,250 feet. The Salt formation is the producing formation. C. V. Inglefield & Co. found all the sands on the D. P. Inglefield farm in West Bethlehem Township dry down to a depth of 2,250 feet. This was a test operation.

Drilling in Southwest Pennsylvania

The second test of Bungard & Co. on the R. C. Clark farm in South Franklin Township, Washington County, has been drilled to a depth of 150 feet. The test of the Local Syndicate drilling on the R. Kennedy farm in Pine Township, Allegheny County, and in the so-called Brush Creek district, has now reached a depth of 235 feet.

LA.-ARK. FIELDS

(Continued from Page 38)

Panola and Shelby, only 12 of them are active or have been active for some time. Most of the 20 tests that are shut down have reached a depth of 3,000 feet or more, without encouraging results, and it is expected that many of them will be abandoned within the near future. After the discovery of the East Texas Field, west of these counties, extensive blocking of acreage with drilling contracts attached was practiced, but to date none of the numerous tests has shown results that would indicate that new pools are to be uncovered. The sand underlying the Austin chalk where production is obtained in Gregg and Rusk Counties, runs out to the east and merges into the Georgetown lime, or if it is present, it is dry, containing no oil or gas. The shore line structure on which the East Texas Field is located does not extend to those border counties, and if production is obtained in these areas, it will come from entirely different structures in those counties included in the Sabine uplift, a structure covering northwest Louisiana and some of the areas of these border East Texas counties. Gas is obtained in Panola County from the Oolitic lime of the Trinity group, but there is no sand underlying it to indicate that oil may be produced from that formation.

Richland Gas Field

Although the Richland gas field has not come through with a producer in several weeks, several wells are nearing the pay horizon and should be completed during another week. Southern Carbon Co.'s No. 1 Pollard, Section 26-16-5e, is drilling at 2,050 feet, and the same company's No. 7 Rosengrant & Ducomb, Section 24-17-5e, has set 6-inch casing at 2,285 feet. The United Gas Public Service Co. is drilling at 2,015 feet on its No. 5 Earle, Section 25-17-5e, and has set 6-inch casing at 2,300 feet in its No. 1 Faust in Section 13-17-5e.

In the Zwolle Field

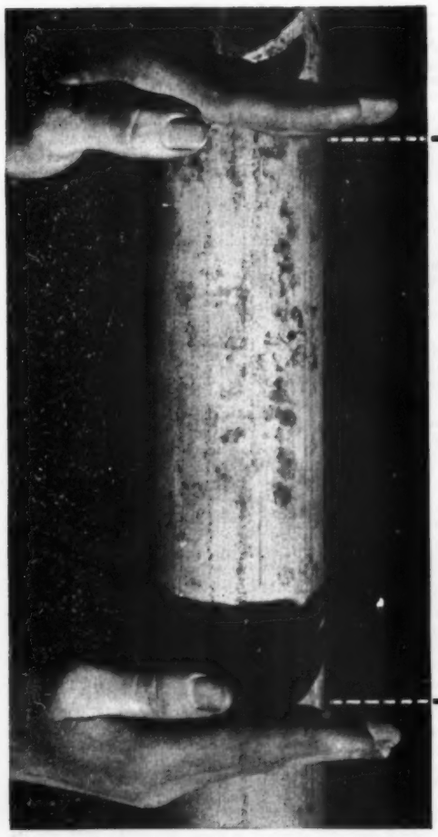
In the Zwolle Field of Sabine Parish, there are five wells waiting on standard rig to pump, and several others in the proven areas and on the outside edges that are nearing the pay horizon. T. M. LeGrand's No. 1 Peterson, Section 34-7-13, is reported to have a good show of oil and gas at 2,243 feet and arrangements are being made to set 6-inch casing to test. This wildcat is 3 miles west of the farthest westward extension of the field southwest of Zwolle townsite production. The operators claim to be getting their show in this well from sand and not from chalk as is found in the Zwolle Field at slightly lower depths. Another wildcat in this vicinity that is being closely watched is W. M. Coates' No. 1-A Bowman-Hicks, in Section 18-7-13, which is drilling below 2,000 feet. This test is located between the Zwolle and Blue Lake areas, and if successful, will form a connecting link between these producing fields.

COLOMBIAN OIL LAW CODIFIED

The new oil law of Colombia, South America, and its regulations, together with all other provisions of the Colombian constitution and of related laws, have been published in English and Spanish in a single volume under the title "The Oil Code." The compilation was made by Dr. Manuel A. Alvarado and translated into English by J. M. Restrepo-Millan. Copies of the volume, priced at $6, plus postage of 35 cents, may be obtained from Doctor Alvarado, Bogota, Colombia.

PETROLEUM ACCOUNTANTS MEET

Fifty-four members of the Petroleum Accountants' Society of Oklahoma were present at the banquet in Tulsa Thursday night at which L. D. Messner presided. Three directors were elected: L. P. Harrington of the Pure Oil Co., L. D. Messner of the Barnsdall Corp., and D. B. Catterlin of the Gypsy Oil Co. The election of officers for the ensuing year will be held at the next meeting, the third Thursday evening in November.



This much bare pipe wastes

750 lbs. of coal per year

J-M Insulation will save 90% of that waste . . .

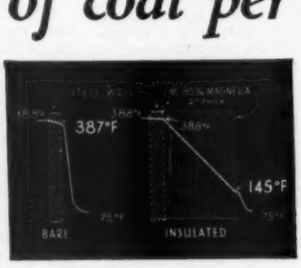


Diagram showing how insulation stops heat loss.

PER foot of length, a bare 3-inch line carrying saturated steam at 200 pounds' pressure will lose approximately 1052 B.t.u. per hour. In a year every foot of this bare pipe wastes the equivalent of 750 pounds of coal.

2 inches of Johns-Manville 85% Magnesia Insulation will save approximately 90% of it—the equivalent of 675 pounds of coal per linear foot of pipe. It costs only a fraction of the value of the fuel it saves.

How much bare pipe in your plant?

It will pay you to make a thorough inspection for possible heat losses. For heat may be escaping from many innocent looking surfaces—from bare pipe flanges, fittings or boiler drumheads, thru boiler walls. You may be losing heat from process equipment; from numerous places where the insulation is too thin . . . or the wrong kind . . . or improperly applied.

But only careful inspection will disclose these losses. Johns-Manville with its 70 years' experience in the problems of insulation can offer you engineers qualified to discover sources of these heat losses—tell you how much such waste is costing you—show you where surfaces are inadequately insulated. Their suggestions cost you nothing—put you under no obligation and may result in substantial savings. Address Johns-Manville, 292 Madison Ave., N. Y. C.

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Industrial Insulation

SOUTHWEST TEXAS PROVEN AREAS

(Continued from Page 42)

CAMP POOL—GUADALUPE COUNTY

John F. Camp's No. 1 Dan Denman, 150 ft. to N line, 450 ft. to E line of tr. in Wm. Arrington Sur. ....T. D. 2,400 ft.; set csg.
Humble O. & R. Co.'s No. 1 Dan Denman, 450 ft. to N line, 150 ft. to W line of lease in Wm. Arrington Sur..T. D. 2,380 ft.; filled drill stem in five and quarter minutes.

WALSH POOL—JIM WELLS COUNTY

Larcro Pet. & Gas Co.'s No. 2 Wade, 800 ft. S of No. 1..T.D. 2,355 ft; drlg.

CARTWRIGHT POOL—LIVE OAK COUNTY

Houston Oil Co.'s No. 14 Cartwright, 1,000 ft. W of No. 23 Cartwright ....T.D. 5,400 ft; standing.

CHITTIM POOL—MAVERICK COUNTY

Texas Gas Utilities' No. 8 Chittim, 24 ft. S of No. 7 Chittim ....T.D. 4,810 ft; S.D.

SAXET FIELD—NUECES COUNTY

Gulf Coast Oil Co.'s No. 1 Sagarin....T. D. 4,272 ft.; drlg.
Gulf Coast Oil Co.'s No. 1 Elder, NW of same company's No. 1 Harrell ....T. D. 4,882 ft.; in sand showing oil.
Neal-Milton and Kepley Pet. Co.'s No. 1 J. N. Roark, 200 ft. to S line, 200 ft. to E line of 106-ac. tr. ....T. D. 4,836 ft.; resetting liner.
Saxet Oil Co.'s No. 1 McCampbell, 600 ft. from N and 1,900 ft. to W lines of tr. ....T.D. 2,545 ft; drlg.
Southern Drlg. Co.'s No. 1 Alexander, 200 ft. to S line, 150 ft. to E line of farm ....T. D. 4,650 ft.; drlg.
Saxet Oil Co.'s No. 3 Donigan, north offset to Zoch's No. 1 Baldwin ....Location.

WELDER FIELD—SAN PATRICIO COUNTY

Welder Oil Corp.'s No. 3 Welder, 800 ft. NE of No. 2 Welder ....T.D. 3,671 ft; set csg.

WHITE POINT POOL—SAN PATRICIO COUNTY

Saxet Oil Co.'s No. 18 Rachel ....Rigging up.

LOS OLMOS POOL—STARR COUNTY

Los Olmos O. & G. Co.'s No. 1 Seabury, 1,800 ft. to S line, 175 ft. to E line of 686-ac. tr. in Porcion 75....T.D. 366 ft; set csg.; waiting on cmt.
Hooks & Weaver's No. 2 Kelsey-Bass, 1,350 ft. from W line, 1,100 ft. from S line, Blk. 2, Sur. 6, sub. of Porciones 75, 76, 77 Jurisdiction of Camargo ....T. D. 500 ft.; completed 25 bbls.
L. L. Smith No. 1 Kelsey-Bass, Blk. 3 sub. Porciones 75, 76, 77, Jurisdiction of Camargo ....Location.

CAROLINA-TEXAS POOL—WEBB COUNTY

Carolina-Texas O. & G. Co.'s No. 10 Barnsley, 150 ft. to E line, 200 ft. to S line of Blk. 14, Sur. 268....Location.
E. A. Sterling & Co.'s No. 1 de la Garza, 150 ft. from N and W lines of Blk. 30, Sur. 326 ....T. D. 2,208 ft.; waiting on cement.

COLE POOL—WEBB COUNTY

French Oil Corp.'s No. 4 R. Benavides, 1,945 ft. from N line, 150 ft. from W line of Sur. 659 ....T. D. 2,336 ft.; complete 100 bbls. in oil.
O. W. Killam's No. 21 Bruni, 1,020 ft. to SW line, 170 ft. to NW line of Sur. 3 ....T .D. 2,312 ft.; complete 10,000,000 ft. gas.
O. W. Killam's No. 22 Bruni, Mariana Arispe grant....Location.

ESCOBAS POOL—ZAPATA COUNTY

Pray & Chamberlain's No. 4 Garza, Blk. 1, Comitas grant. Making location.
E. K. Bateman's No. 1 M. Garza, in Comitas grant, 200 ft. to NW line, 660 ft. to NE line of Blk. 29....Rigging up.
Trevino Oil Corp.'s No. 12-A Trevino, 665 ft. to S line, 550 ft. to W line of Blk. 15, Sur. 412....T. D. 1,225 ft.; waiting on cement.
Grayburg Oil Co.'s No. 1 F. G. Martinez, 150 ft. from S and W lines of 240-ac. tract in E½ of Sur. 4....Rigging up.
Newton, Owens & Evans' No. 1 Garza, 200 ft. to N and W line Block 4, Share 1, Sur. 161 ....T. D. 150 ft.; drlg.
Pray & Chamberlain's No. 4 Garza, Block 1, Comitas grant ....Making location.

KILLAM-CUELLAR POOL—ZAPATA COUNTY

O. W. Killam's No. 30-A Cuellar, 570 ft. to NE line, 1,720 ft. to NW line of Cerrito Blanco grant....T. D. 1,522 ft.; tested dry; drlg. deeper.
O. W. Killam's No. 31-A Cuellar, 3,350 ft. from NE line, 475 ft. from NW line of Cerrito Blanco grant..T. D. 250 ft.; drlg.

CHARCO REDONDO POOL—ZAPATA COUNTY

Bob & Richey's No. 25 Martinez, 1,300 ft. from NE line, 1,090 ft. from SE line, Block 24, Dukes sub. Charco Redondo grant ....Location.
Bob & Richey's No. 26 Martinez, 1,460 ft. to NE line 855 ft. to NW line, Block 24, Duke sub. Charco Redondo grant ....Location.
Bob & Richey's No. 27 Martinez, 870 ft. to SE line, 150 ft. to NE line, Block 24, Duke sub. Charco Redondo grant ....Location.

WILDCAT OPERATIONS IN SOUTHWEST TEXAS

(Continued from Page 42)

BEXAR COUNTY

Callahan Final Oil Co.'s No. 1 B. H. Buck, 900 ft. to E line, 3,200 ft. to S line of farm, in J. M. McGamley Sur. ....Rigging up.
J. E. Anderson's No. 1 Suburban Irrigated Farms, 500 ft. to N line, 600 ft. to E line of C. Logan Sur. ....T. D. 1,146 ft.; drlg.
Ingersoll-Miller's No. 2 Carruth, 3,900 ft. S, 2,500 ft. W of NE cor. of tr. in Francisco Bolen Sur. ....T.D. 480 ft; standing.
Dr. Ewell Neil's No. 1 J. Watson, 500 ft. from W line, 1,700 ft. from S line of B. Martinez Sur. ....T.D. 1,100 ft; waiting on drill stem.
Schneider, Rees et al's No. 2 Claussen, 12 miles NE of San Antonio ....T.D. 865 ft; standing.
Tri-State Oil Co.'s No. 1 E. B. Carruth, 2,500 ft. from S line, 2,660 ft. from E line of tr. in F. Bolen Sur. ...T.D. 770 ft; set 10-in. csg.
S. W. Blount's No. 1 S. A. Land Co. I. Perez Sur. ....Spudding.

CALDWELL COUNTY

Ralph Ogden's No. 1 Nealson, 150 ft. from N and E lines of farm, in John B. Gray Sur. ....T. D. 1,300 ft.; tested 5 bbls. oil 20 bbls. water.
Ralph R. Lewis' No. 1 Keith McGee, 600 ft. from E and S lines of tr. in J. Pinchback Sur. ....T.D. 50 ft; laying wtr. line.

COMAL COUNTY

Caldwell & Lanier's No. 1 T. J. Byler, 175 varas from W line, 370 varas from N line of 320-ac. tr. in the H.E.&W.T. No. 5,894 Sur. ....T.D. 722 ft; standing.

DEWITT COUNTY

Gibson & Sturm's No. 1 Clark, Dolores Alderete Sur. ....Rigged up; standing.

DUVAL COUNTY

Thomas & Tarver, Inc.'s No. 1 Wood-Welder, 500 ft. to N line, 4,320 ft. to W line of Sur. No. 102 ....Rigging up.
S. J. Carpenter et al's No. 1 Juan Benavides, Blk. 33, Mesquite grant ....T.D. 1,712 ft; standing.
Frank Gravis' No. 1 Shallert, Sur. No. 255 ....T.D. 1,450 ft; S.D.
South Texas Prod. Co.'s No. 1 Benavides, 330 ft. to N and E lines of Sur. 173 ....T. D. 2,451 ft.; complete 35,000,000 ft gas.

FRIO COUNTY

A. H. Wray's No. 1 Roche, 330 ft. from N and W lines of NW SE, Sec. 123, A. Hutzler Sur. ....T.D. 2,404 ft; drlg.

GUADALUPE COUNTY

Barnhill et al's No. 1 H. L. Hoffman, 450 ft. to N and W lines of farm, in John G. King Sur. ....Rigging up.

Bolling et al's No. 1 J. E. Lennie, 850 ft. from E line, 1,050 ft. from S line of farm, in Cortario Sur. .....T. D. 1,425 ft.; drlg.
Harry Bruner's No. 2 Jim Sherrill, 330 ft. from NW and SW lines of tr. in Geo. Allen League .....T.D. 180 ft; standing.
McGarrity et al's No. 1 A. Wesch, Jr., 150 ft. to N and E lines of farm, H. M. Thompson Sur. .....T.D. 1,200 ft; standing.
Schleyer, Atherton and Armstrong's No. 1 Ogletree, Robert Smith Sur. .....T.D. 1,745 ft; S.D.
M. W. Eiser's No. 1 Wells, 2,790 ft. to W line, 150 ft. to S line of farm in Jose de la Baume Sur. .....Rigging up.

GOLIAD COUNTY

Plymouth Oil Co.'s No. 1 Parks, 5 miles NE Goliad.....Derrick.
Camp and Stanolind's No. 2 Pettus, 1,589 ft. N, 62 degrees 46½ minutes W of No. 1 .....T. D. 4,314 ft.; tested dry.
Neal et al's No. 1 J. M. Pettus, 10,700 ft. to S line, 2,500 ft. to E line of Pedro Trevino Sur. .....Location.

HAYS COUNTY

J. C. Jones et al's No. 1 Byder, John Ingram Sur. .....T.D. 930 ft; standing.

JIM HOGG COUNTY

Cole Pet. Co.'s (Peterman-Minahan) No. 1 Palacious, 450 ft. from W line, 150 ft. from N line of Blk. 14, Sur. 231 .....T. D. 2,430 ft.; abnd.

JIM WELLS COUNTY

Stanolind O. & G. Co.'s No. 1 N. A. Hoffman, 6,800 ft. from S line, 10,000 ft. from W line of most easterly NE cor. of 7,000-ac. ranch in La Trinidad Sur. ....T. D. 4,425 ft.; drlg.

KENDALL COUNTY

Borgett et al's No. 1 W. Haag, 3,804 ft. from N line, 1,506 ft. from W line of W. Avery Sur. .....T.D. 1,245 ft; S.D.
Dixon Oil Co.'s No. 1 Ottmar Behr, 823 ft. from S and N lines of Jessie Wilson Sur., 3 miles S of Sisterdale .....T.D. 2,708 ft; standing.
Sitton et al's No. 1 Garvin, C of NE of D. L. Richardson Sur. in the D. L. Richardson Sur., 1 mile NE from Kendalia .....T.D. 1,482 ft; S.D.
Fred S. Dibble's No. 1 Ellebrach, Sur. 77, N part of county .....T.D. 50 ft; S.D.
Sartin's No. 1 Lawhon, 30 ft. SE of Perkins' No. 1 Lawhon; taken over at 281 ft. .....T.D. 575 ft; no report;

KERR COUNTY

Herbert Oil Co.'s No. 1 J. D. Witt, 1,320 ft. N line, 1,320 ft. W line of Sec. 1,923, W. H. Hamilton Sur. ..T.D. 200 ft; standing.
Evans & Gant's No. 1 Seiker-Mears, C.C.S.D.&N.G.R.G. Sur. No. 1,605 .....T.D. 4,031 ft; S.D.
Evans & Gant's No. 1 E. Young, A. E. Burge Sur. No. 28 ..T.D. 1,312 ft; standing.
Evans & Gant's No. 2 Love, 150 ft. S and W line of Sur. 1,593 .....T.D. 3,260 ft; resumed drlg.

KARNES COUNTY

W. F. Neuhaus' No. 1 Russell, 150 ft. to E line, 150 ft. N of Highway, in Carlos Martinez Sur. .....T. D. 1,200 ft.; drlg.
United North & South's No. 1 Morrell, 330 ft. from W line, 990 ft. from S line of tr. in Carlos Martinez Sur. .....Set surface csg.

LA SALLE COUNTY

Buckley Ranch O. & G. Co.'s No. 1 Buckley, 200 ft. from S line, 330 ft. from W line of Sur. No. 37 .....T. D. 3,503 ft.; coring.

LIVE OAK COUNTY

Henderson Coquat's No. 1 Hewitt .....T.D. 400 ft; standing.
W. G. Schimmel's No. 1 Terrell in Mark Killely Sur. .....Location.

LEE COUNTY

A. H. Wheeler and associates' No. 1 fee, Blk. 47, H. Donohue Sur. .....T.D. 3,525 ft; S.D.
C. B. Polk et al's No. 1 Stoltz, Hiram Donohue Sur. ....T.D. 2,300 ft; S.D.
Chadwick et al's No. 1 Hickey, 1,000 ft to NW line, 300 ft. to NE line of farm in Warreiman Sur. .....T. D. 20 ft.; spudded in.

MAVERICK COUNTY

J. N. Boicourt's No. 1 Bandera, School Land .....T.D. 2,284 ft; standing.

McMULLEN COUNTY

Whall, Scherer et al's No. 1 Shiner, Henry Brewer Sur...T.D. 2,008 ft; S.D.
A. E. Adams' No. 1 Martin, 150 ft. NW line, 150 ft. to SW line of E. Melon No. 212 Sur. .....T. D. 363 ft.; standing.
Jacob, Buzzini & Pickett's No. 1 Jacob in NE part of county .....Location.

MEDINA COUNTY

Frank A. Brown's No. 1 Fohn, 150 ft. from E line, 790 ft. from N line of J. F. Torry Sur. No. 113.....T.D. 922 ft; twisted off drill stem; fishing.
Genard Bros.' No. 1 L. Crawford, 150 ft. to N and W lines of tr. in J. Keppler Sur. No. 478 .....T.D. 2,145 ft; drlg.
J. H. Hickey's No. 1 Jungman at N end Chicon Lake....T.D. 650 ft; S.D.
Star Pet. Co.'s No. 1 Medina Valley Irrigation Co., 150 ft. from S and E lines of Isom Palmer Sur. No. 20....T.D. 825 ft; S.D.

MILAM COUNTY

Oil-Tex Oil Corp.'s No. 1 E. Lawson, 560 ft. from NE and 270 ft. from SE lines of farm in Fernando Rodriguez Sur., near Cause .....T. D. 2,550 ft.; standing.
H. W. Elliott's No. 1 Marek, 767 ft. from N line, 500 ft. from W line of 160-ac. tr. in B. Wickson Sur. .....T.D. 1,295 ft; S.D.
Bowlen's No. 1 Beard, 1,350 ft. from SE line, 450 ft. from SW line of farm, in J. F. Guthrie Sur., 4 miles S Thorndale .....T.D. 2,036 ft; drlg.
Red Bank Oil Co.'s No. 1 Foster, A. G. Berry Sur. .....T. D. 4,440 ft.; fishing.

NUECES COUNTY

Southern Crude Oil Pur. Co.'s No. 1 Chas. E. Stratton, 1,650 ft. E line, 330 ft. S line of P. Sancho Sur. ....T.D. 4,765 ft; testing.

REAL COUNTY

McGinley Corp.'s No. 1 Haby, C of SW, Sec. 175 .....T.D. 2,530 ft; S.D.

TRAVIS COUNTY

Bass & Speed's No. 1 Joe F. Nagle, 750 ft. from SW line, 450 ft. from NW line of farm in L. Kimbro Sur..T. D. 895 ft.; shut down.
C. R. Franklin et al's No. 1 J. Wilson, 160 ft. from N and W lines of farm in A. Alexander Sur. .....T. D. 795 ft.; drlg.
Fritz Fuchs' No. 1 Ballerstedt, 450 ft. from N line, 750 ft. from E line of tr. in Amos Alexander Sur. ...T. D. 1,200 ft.; abnd.
Kay & Henze's No. 1 Hatech, in C of tr. in S. Hamilton Sur. .....T. D. 360 ft.; standing.
Waldron et al's No. 1 T. Cook, 900 ft. from NW line, 3,500 ft. from SW line of D. H. Minor Sur. .....T. D. 1,355 ft.; standing.

WEBB COUNTY

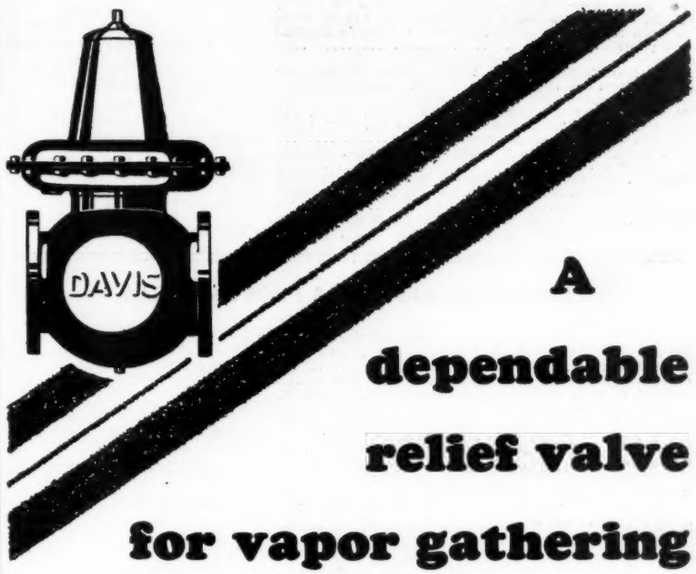
D. W. Killam's No. 3 Bruni, 9,195 ft. to NE line, 6,890 ft. to SE line of tr. in Borrego grant .....T. D. 1,400 ft.; drlg.
Newton, Owens & Evans' No. 1 Garza, 200 ft. to N line, 200 ft. to W line of Blk. 4, Share 1, Sur. 161 .....Location.
Power & Dettenhaim's No. 1 Cowan & Goss, 1,870 ft. from W line, 1,656 ft. from N line of Sur. No. 1,606..T.D. 150 ft; drlg.
Winfield Killam's No. 1 Killam, Blk. 18, Sur. 1,618, near Reiser .....T. D. 2,050 ft.; drlg.
Colé Pet. Co.'s No. 4 Benavides, 2,480 ft. to E line, 160 ft. to S line of Sur. No. 1,613 .....T.D. 4,050 ft; S.D.
Vansler, Johnson & Peacock's No. 1 Laurel, 425 ft. to N line, 600 ft. to E line of Blk. 10, Sur. 271 .....Location.

WILLIAMSON COUNTY

Hays & Gee's No. 1 E. G. Johnson, 1,800 ft. from N line, 170 ft. from E line of tr. in B. C. Low Sur., S of Georgetown .....T. D. 1,350 ft.; drlg.
H. Fritz' No. 2 fee, 35 ft. N of No. 1 fee .....T. D. 1,100 ft.; standing.
McLean's No. 1 R. C. Miller, 300 ft. from S line, 150 ft. from W line of farm in Manlove Sur. .....T. D. 1,700 ft.; shut down.
Bowman et al's No. 1 Cruse, 500 ft. to NW line, 150 ft. to NE line of farm in H. W. Eubanks Sur. .....T. D. 800 ft.; shut down.
J. S. Wilson's No. 1 Speckles, 150 ft. N of road, 600 ft. from W line of farm in J. Jordan Sur., 1 mile N of Coupland .....S.D. 875 ft.

WILSON COUNTY

A. M. Blume's No. 1 Nickolson, C. Diaz Sur. .....T. D. 1,600 ft.; shut down.



A dependable relief valve for vapor gathering systems

VAPOR recovery systems pay for themselves through stopping the loss of light fractions from tanks. Davis Super-sensitive Gas Relief Valves are a necessary auxiliary to such systems.

This balanced relief valve is controlled from the tank or inlet side. Pressure conditions in the discharge line do not affect it. An internal dash pot steadies the action and insures accuracy. A metal hood encloses the operating parts so that the valve may be used in exposed positions. Internal parts are sulphur-resistant. The diaphragm is oilproof.

This is one of the line of Davis Automatic Valve Specialties described in our Catalog 11, which will be sent on request.

DAVIS REGULATOR COMPANY
2543 S. Washtenaw Avenue
CHICAGO, ILLINOIS

WESTCOTT & GREIS, Inc.
Sales Engineers
TULSA LOS ANGELES DALLAS

Automatic valve makers for over fifty years

DAVIS VALVE SPECIALTIES

OGJ 10-29 Gray

ZAPATA COUNTY

Ballard & Mercer's No. 1 Flores, 500 ft. from NE line, 580 ft. from SE line of Blk. 27, Porcion 37 ..... Rigging up.
F. H. Etheridge's No. 1 J. Bustamente, 640 ft. from NE line, 150 ft. from NW line of farm in Comitas grant ..... T. D. 1,477 ft.; complete 500 bbls.

M. D. Slator's No. 1 Slator, 1,000 ft. from SE line 1,200 ft. from SW line of Blk. 25, J. V. Borrego grant .... T. D. 935 ft.; bailed dry.
F. H. Etheridge's No. 1 Henne-Winch, in Sur. No. 286.. T.D. 1,900 ft; drlg.
T. H. Ward's No. 1 Uribe, 150 ft. NW line, 150 ft. SW line, Blk. 3 Subd., Share 7, Porcion No. 6, T. Uribe Partition of Jose V. Borrego Sur. ..... Rigged up and standing.
Bill Henry et al's No. 1 Gopher Trust estate, Borrego grant ..... T.D. 1,525 ft; standing.
National Oil Co.'s No. 1 Zapata Trust estate, 617 ft. NW line, 96 ft. NE line, Blk. 97, De From Subd., Porcion 6 ..... T.D. 600 ft; standing.
National Oil Co.'s No. 2 Adams, 150 ft. from NW line and SW line, Blk. 11, Borrego grant ..... T.D. 1,320 ft; standing.

LOUISIANA-ARKANSAS PROVEN AREAS

(Continued from Page 38)

W. M. Coates' No. 2 Hale, 330 ft. S and E, NW cor. SW NE, Sec. 1-7-13 ..... Drlg. 2,120 ft.
Crescent Drilling Co.'s No. 1 Byrd, Sec. 12-7-11 ..... Set 6-in. 2,375 ft.
Dengail O. & G. Co.'s No. 3 Nulton, 330 ft. N and E, SW cor. NW NE, Sec. 1-7-13 ..... Derrick.
O. A. Gautier et al's No. 1 Mischell, 330 ft. E, 150 ft. N, SW cor. SE NW, Sec. 30-8-12 ..... S.D; W.O. 2,532 ft.
Hawkins & Antoon's No. 1 Newton, Sec. 1-7-11 ..... W.O.S.R. 2,609 ft.
Hudson & Bird's No. 1 Walden, 480 ft. N, 300 ft. E, SW cor. SW NE, Sec. 26-8-11 ..... S.D. 1,800 ft.
Lanier & Dyer's No. 1 Barthold, 335 ft. N, 525 ft. E, SW cor. SE NE, Sec. 35-8-12 ..... W.O.S.R. 2,531 ft.

Zeke Lohman's No. 1 McCormick, 660 ft. E, 330 ft. N, SW cor. NE SW, Sec. 2-7-11 ..... S.D. 1,606 ft.
Loring Oil Co.'s No. 13 Bowman-Hicks, 1,280 ft. S, 275 ft. E, NW cor. SW NW, Sec. 15-7-12 ..... Drlg. lime 3,885 ft.
Lyons & Neely's No. 3 Byrd, Sec. 1-7-11 ..... S.D. 400 ft.
L. K. McGuffin's No. 1 Bush, NW cor. NW SE, Sec. 1-7-11 ..... S.D. 400 ft.
Ben Merritt, tr.'s No. 2 Byrd, Sec. 1-7-11 ..... S.D. 38 ft.
Ohio Oil Co.'s No. 12 Bowman-Hicks, Sec. 2-7-12, 150 ft. N and W, SE cor. NE NE ..... Began Oct. 19; set 10-in. 221 ft.
H. W. Perritt's No. 5 Bowman-Hicks, 330 ft. S, 410 ft. E, NW cor. SW SW, Sec. 2-7-12 ..... S.D.; W.O. 2,437 ft.

Eddie Self's No. 2 Jacob, Sec. 1-7-11 ..... Drlg. 1,600 ft.
Stovall, tr.'s No. 2 Nulton, 241 ft. N, 330 ft. W, SE cor. NE NW, Sec. 1-7-13 ..... Drlg. 1,350 ft.

UNION PARISH

Interstate Nat. Gas Co.'s No. 27-C Howard, 660 ft. S and E, from C, Sec. 32-20-3e ..... Set 12½-in. 170 ft.
Stovall Gas Co.'s No. 2 Howard, Sec. 32-20-3e, 1,320 ft. S, 1,980 ft. W, NE cor. ..... Set 12½-in. 164 ft; drlg. 320 ft.

ARKANSAS

UNION COUNTY—EL DORADO

Lion O. & R. Co.'s No. 9-A G. P. Hayes, 242 ft. S, 246 ft. W, NE cor. Lot 5, NE, Sec. 4-16-15 ..... Cored rock salt 5,974-80 ft.
Southern Prod. Co.'s No. 1 Wingfield, NE cor. SE NW, Sec. 16-19-15 ..... Arranging to resume drlg.

UNION COUNTY—URBANA

Marine Oil Co.'s No. 1 Winn est., 330 ft. S and E, NE cor. S½ NW, Sec. 11-18-13 ..... T.A. 3,586 ft.
Marine Oil Co.'s No. 2-E Thompson, 330 ft. N, 330 ft. E, SW cor. NE NE, Sec. 10-18-13 ..... Location.
Wilson & Chapman's No. 1-B Hadley, Sec. 3-18-13, 330 ft. S and W, NE cor. SE NW ..... Rigging up.

EAST TEXAS

PANOLA COUNTY

Daisy O. & G. Co.'s No. 1 Rucks, Jno. Palmer Sur. ..... S.D. 3,270 ft.
Dillon & Braham's (was W. G. Banks et al's) No. 1 C. O. Baldwin, 1,395 ft. W, 1,962 ft. S, NE cor. Baldwin 290 ac. in Hampton West Sur. ..... S.D. 1,555 ft.
Nat. Gas Prod. Co.'s No. 8 Floyd, 50 ft. S and 100 ft. W from No. 1 Floyd, Ben C. Jordan Sur. ..... Rigging up.
United Prod. Corp.'s No. 17 Steele, 1,320 ft. N, 660 ft. W, SE cor. C. D. Steele lse., in B. C. Jordan Sur. .. Location.
Southwestern O. & G. Co.'s No. 1 E. R. Vinson, 3,005 ft. S, 1,001 ft. W, NE cor. C. T. Anderson Sur. .... Dry and abd. 2,650 ft.

MISSISSIPPI

HINDS COUNTY

Ferguson-Fuller et al's No. 1 Sours et al, Sec. 34-6n-1e, 665 ft. E, 50 ft. S, NW cor. SW ..... Rigging up.
Love Pet. Co.'s No. 1 Federal Compress & Warehouse Co., Sec. 15-5n-1e, 662 ft. S and 2,120 ft. E, NW cor. .. Completed 25,000,000 ft. gas at 2,446 ft.
Millsaps College's No. 1 fee, Sec. 34-6n-1e, 2,225 ft. N, 1,412 ft. W, SE cor. Sec. ..... Location.

RANKIN COUNTY

James Alexander, tr.'s No. 1 Wright Cast Stone Co., 200 ft. S, 1,460 ft. NE cor. NE NW, Sec. 13-5n-1e ..... Set 6⅝-in. 2,392 ft.
Cummins & Montgomery's No. 1 Ivey, Sec. 13-5n-1e, NE Lot 10, Blk. D, E. Jackson Pl., first addn. .... Derrick pattern.
gas 2,454 ft.
J. E. Grandstaff et al's No. 1 East, Sec. 13-5n-1e, 1,-180 ft. W and 515 ft. N, SE SW ..... Drlg. 1,550 ft.
Muse & Muse's No. 1 Seany, Sec. 12-5n-1e, 2,670 ft. E, 375 ft. S, NW cor. SW ..... Derrick.
Orr's No. 1 Casey, Sec. 12-5n-1e, 540 ft. E and 1,920 ft. S, NW cor. SW ..... Drlg. 2,230 ft.

WILDCAT OPERATIONS IN MISSISSIPPI

CLARKE COUNTY

Company, farm and location—	Remarks:
Gulf Ref. Co.'s No. 1-A Long Bell Lbr. Co., C SW SW, Sec. 10-2n-16w	Set 6⅝-in. 3,675 ft.

HINDS COUNTY

Hilgard Gas Co.'s No. 1 The Mississippi Co., Sec. 4-5n-1e, 1,300 ft. E and 450 ft. N of cen. of Sec. ..... Cored black shale 2,516-20 ft.
Howard Oil Co.'s No. 1 Jackson College, C NW NW, Sec. 9-5-1e ..... S.D. 74 ft.
Southern Pet. Co.'s No. 1 Wilson (was Tri-State O. & G. Co.'s), 320 ft. E, 240 ft. N, SW cor. SE NE, Sec. 28-6-1e ..... S.D. 20 ft; W.O.
F. E. Stewart et al's No. 1 Miss. Cotton Seed Products Co., Sec. 4-5n-1e, 320 ft. S and 440 ft. W of NE cor. SE ..... Derrick.

HUMPHREYS COUNTY

Danciger O. & G. Co.'s No. 1 Belgrade Lbr. Co., C NW, Sec. 29-14n-4w ..... Drlg. 2,296 ft.

JASPER COUNTY

Bay Springs Pet. Co.'s No. 1 Keyes, C NW NE, Sec. 2-12-9 ..... S.D. 2,360 ft.

MONROE COUNTY

Amory Dev. Co.'s No. 1 Bourland, Sec. 2-13-19 ..... S.D. 3,015 ft.
McAlpine et al's No. 1 Cowart, second hole, Sec. 2-12-19.. Drlg. 3,535 ft.

NEWTON COUNTY

Bob Dalton's No. 1 Majure, 400 ft. N, 300 ft. E of SW cor. SE, Sec. 25-6n-11e ..... S.D. 575 ft.

NOXUBEE COUNTY

Thompson & Donohue's No. 1 Donohue, Sec. 25-16n-17e.. Set 8-in. 1,605 ft; T.D. 1,715 ft.

RANKIN COUNTY

Attkisson & Dyer's No. 1 Valentour, 200 ft. S, 200 ft. E, NW cor., Sec. 18-5n-2e ..... S.D. 1,290 ft.
Gulf Ref. Co.'s No. 1-A Hanna, Sec. 23-6n-1e ..... Drlg. 3,385 ft.
Majestic O. & G. Co.'s No. 1 Elton Lbr. Co., Sec. 10-4n-3e. Derrick.

Square Deal O. & G. Co.'s No. 1 Spann, NW cor. SE NE, Sec. 13-5n-1e ..... S.D. 2,495 ft.
United Gas Public Service Co.'s No. 1-A McLaurin, 3,-950 ft. E, 660 ft. S, NW cor. SW, Sec. 8-5n-2e ..... Repairing rig 2,622 ft.
Willis & Culley's No. 1 Applewhite & Holden, 10 ft. N, 60 ft. E, SW cor., Sec. 12-5n-1e ..... Set 6⅝-in. 2,377 ft.

SCOTT COUNTY

M. U. Culley et al's No. 1 Owens, Sec. 2-8-9 ..... Derrick.

WARREN COUNTY

Eagle Bend O. & G. Co.'s No. 1 Kiger, SW cor. SW SE, Sec. 9-18-2 ..... S.D. 2,607 ft.
United Gas Public Service Co.'s No. 1 Tchula Co-Operative Store, 1,980 ft. W, 660 ft. N, SE cor. SE, Sec. 33-15n-3e ..... Drlg. 2,598 ft.

WEBSTER COUNTY

P. J. McAlpine's No. 1 Henly (was Cumberland Oil Co.'s No. 1 Henly), SE NW, Sec. 15-21n-11e ..... S.D. 1,800 ft.

WINSTON COUNTY

Miss. Drlg. Co.'s No. 1 Scarbrough, NW cor., Sec. 15-12-14 ..... Drlg. 4,010 ft.

WILDCAT OPERATIONS IN KANSAS

(Continued from Page 36)

MORRIS COUNTY

Allender et al's No. 1 Wycoff, C SW SE, Sec. 5-17-7..... S.D. 105 ft.
Urschel et al's No. 1 Bersuch, NW SE NW, Sec. 10-17-7.. Fishing 915 ft.
Hankerson et al's No. 1 Cessman, SW SE, Sec. 24-16-9.. S.D. 2,625 ft.

NORTON COUNTY

Richards et al's No. 1 Colby, Sec. 17-4-21w..... Rig.

OSAGE COUNTY

Briggs & Smith's No. 1 Wood, SE NW, Sec. 21-14-15.... S.D. 2,058 ft.

RAWLINS COUNTY

J. G. Durham et al's No. 1 Weaver, SE cor., Sec. 3-2-35w.. S.D. 3,925 ft.

RICE COUNTY

Cress et al's No. 1 Sharp, SE NE, Sec. 13-20-10w ..... Show oil 3,107-15 ft; Silicious l.- 330-36 ft; estimated 1,500 bbls.; shut in.

RUSH COUNTY

Dewey & Mitchell's No. 1 Greenawalt, C SW, Sec. 17-19-16w ..... Show of oil in Conglomerate 3,835-80 ft; plugged back to 3,825-6 ft; estimated 150 bbls.; S.D.

RUSSELL COUNTY

Agate O. & G. Co.'s No. 1 Rochfellow, SE cor., Sec. 6-13-12w ..... S.D. 3,374 ft.

SALINE COUNTY

Twin Mounds Oil Co.'s No. 1 Weis, C W½ NE NW, Sec. 20-13-4w ..... Fishing 2,710 ft.

SHERIDAN COUNTY

Flo et al's No. 1 Shoemaker, SE SW, Sec. 27-7-26w ..... S.D. 3,495 ft.

STAFFORD COUNTY

Rosenthal, Stanolind and Amerada's No. 1 Gray, C NE, Sec. 11-24-31w ..... U.R. 8-in. cag. 3,495 ft.

STEVENS COUNTY

Argus Prod.'s No. 2 Christopher, C NE, Sec. 10-33-35w.. S.D. 5,521 ft.

SUMNER COUNTY

Tighe et al's No. 1 Thieson, C NW SE SE, Sec. 22-34-2... C.O. 2,465 ft.
Trees Oil Co. and Shell's No. 1 Springate, NE SE SW, Sec. 6-34-2 ..... Drlg. 2,300 ft.
Spencer et al's No. 1 Porter, NE SW, Sec. 12-33-3w..... S.D. 3,775 ft.

WASHINGTON COUNTY

Sincox et al's No. 1 Penwell, NW SE NE, Sec. 16-3-3.... S.D. 1,720 ft.

WILDCAT OPERATIONS IN LOUISIANA-ARKANSAS

(Continued from Page 38)

OUACHITA PARISH

Wilson & Mitchell's No. 1 Williams, Sec. 5-16-1e, 330 ft. E, 240 ft. S, NW cor. SW SE ..... Derrick.

RED RIVER PARISH

La. Oil Dev. Co.'s No. 2 La. Delta Pecan Co., 3,950 ft. S, 300 ft. E, NW cor., Sec. 27-13-11 ..... Spudded in; S.D. 50 ft.
Mack Jourden Co.'s No. 1 Lockett, 4,035 ft. S, 1,080 ft. E, NW cor. SW, Sec. 29, in Sec. 32-13-10 ..... S.D. 2,550 ft.

RICHLAND PARISH

Alto Gas Co.'s No. 2 Hunt, 660 ft. S and E, NW cor., Sec. 13-17-5 ..... Derrick.
National Gas Co.'s No. 1 Singletary, 1,980 ft. N, 660 ft. W, SE cor., Sec. 20-18n-7e ..... S.D. 2,515 ft.
Southern Carbon Co.'s No. 1-B C. M. Noble, 2,966 ft. N, 1,525 ft. W, cor. Secs. 7, 8, 17 and 18, in Sec. 37-15-6.. Location.

SABINE PARISH

W. M. Coate's No. 1 Stille, 330 ft. N, 660 ft. W, SE cor., Sec. 35-8-13 ..... Derrick.
Davidson & Grigsby's No. 1 Martines, Sec. 2-7-13, 330 ft. S and W, NE cor. NW SE ..... Location.
Diffie & Barnett's No. 1 Lites (was J. W. Clark's), 330 ft. N, 330 ft. W, SE cor. SW NW, Sec. 34-8-11..... S.D. 105 ft.
R. L. Gay, tr.'s No. 1-A Long Bell Lbr. Co., 430 ft. S, 200 ft. W, NE cor. NW NW, Sec. 10-8-13 ..... S.D. for wtr. 3,753 ft.
Gehrig Oil Co.'s No. 1 Skinner, Sec. 16-8-11, 615 ft. E, 585 ft. S, NW cor. NW ..... Rigging up.
W. M. Coates' No. 1-A Bowman-Hicks, 330 ft. S and E, NW cor. SW SW, Sec. 18-7-13 ..... Drlg. 1,950 ft.
Langbridge Oil Co.'s No. 1 Stephens, 330 ft. N and E, SW cor. SE NE, Sec. 17-9-11 ..... Arranging to set tubing; T.D. 1,626 ft.
T. M. LeGrand's No. 1 Peterson, 330 ft. N and E of C, Sec. 34-7-13 ..... Arranging to set 6-in. 2,243 ft.
J. J. Keen, tr.'s No. 1 Belton (no check), Sec. 31-9-13 .. Arranging to deepen 1,720 ft.
A. H. Thames' No. 1 Edward est., 150 ft. NW SE cor. NE SE, Sec. 8-8-13 ..... S.D. 1,200 ft.

TENSAS PARISH

U. A. Duvall et al's No. 1 Martin Jacob, 150 ft. S, 150 ft. W, NE cor., Sec. 1-14-11e ..... S.D. 2,775 ft.
A. R. Willis et al's No. 1 Currey, 1,320 ft. S, 1,320 ft. E, NW cor., Sec. 39-11-12 ..... S.D. 3,545 ft.

UNION PARISH

Dan Brooks' No. 1 Odus Douglas, 330 ft. S and E, NW cor. NE SW, Sec. 9-22-2 ..... S.D. 3,509 ft.

VERNON PARISH

Exchange Pet. Co.'s No. 1 White & Grandin, Sec. 29-3n-7w, 1,980 ft. E, 1,430 ft. N, SW cor. Sec. ..... Dry and abd. 2,727 ft.

ARKANSAS

CHICOT COUNTY

R. R. Smith's No. 1 Lytle, 660 ft. N, 660 ft. E, C. Sec. 21-23-3 ..... T.A. 2,975 ft.

COLUMBIA COUNTY

Kendall Oil Co.'s No. 1 Fullenweider, Rhea & Kitchen, Sec. 13-17-22 ..... Arranging to test 804 ft.

CLAY COUNTY

S. C. Jeffus' No. 1 Underwood, 510 ft. N, 350 ft. W, C, NW SE, Sec. 4-20-3 ..... S.D. 1,280 ft.

CLEVELAND COUNTY

Crum & Stillwell's No. 1 E. R. Bell, Sec. 10-10s-12w .... Rigged up and S.D.

CLEBURNE COUNTY
(Cable tools)

Donnelly-Craver et al's No. 1 Donophan Lbr. Co., SE cor. NW, Sec. 33-11-9 ..... S.D. 3,740 ft.

CRAWFORD COUNTY

Ozark Nat. Gas Co.'s No. 1 Hammond, C SE SE, Sec. 29-10-29 ..... Drlg. shale 1,630 ft.

DALLAS COUNTY

E. C. Brewer's No. 1 W. E. Hillman, 330 ft. E, 40 ft. S, NW cor. SE NE, Sec. 20-10-13 ..... S.D; W.O. 2,869 ft.

J. H. James, tr.'s No. 1 Fordyce Lbr. Co., 200 ft. S, 200 ft. E, NW cor. NE, Sec. 11-9-15 ..... S.D. funds 2,520 ft.

Zepp O. & G. Co.'s No. 2 Hillman, 450 ft. E, 340 ft. S, NW cor. SE NE, Sec. 10-20-13 ..... Drlg. plug 2,620 ft.

HOT SPRINGS COUNTY

Star Oil Co.'s No. 1 Cunningham, 285 ft. S, 285 ft. W, NE cor., Sec. 11-5-16 ..... S.D. 1,300 ft.

LINCOLN COUNTY

Lawrence Cook, tr.'s No. 1 McGhee Planting Co., 420 ft. S, 200 ft. W, NE cor. NE SW, Sec. 5-8-7 ..... Fishing D.S. 2,800 ft.

LITTLE RIVER COUNTY

Roberts Oil Co.'s No. 1 H. J. Russell, 330 ft. E, 330 ft. S, NW cor., Sec. 25-12-19 ..... Location.

Stephens et al's No. 1 Dierke Lbr. Co., Sec. 29-12s-31w, 150 ft. S, 330 ft. E, NW cor. NE NW ..... Rigging up.

LOGAN COUNTY

J. H. Flowers' No. 1 J. H. White, Sec. 13-6-26 ..... S.D.; W.O. 3,570 ft.

MILLER COUNTY

W. E. Noel et al's No. 1 Dickson hrs., 1,980 ft. W, 660 ft. S, NE cor., Sec. 11-20-27 ..... S.D. 1,955 ft.

OUACHITA COUNTY

Bolin & McLeon's No. 1 L. D. Nealy, 150 ft. S, 150 ft. W, NE cor. SE SW, Sec. 25-16-15 ..... 600 ft. oil in hole 2,112 ft; W.O. S.R.

Copenhaven et al's No. 2 Berg, C SE SE, Sec. 13-15-17 .. S.D. for funds 532 ft.

M. S. M. Oil Co.'s No. 4 Arnold & Doyle, Sec. 23-16-15, 200 ft. S and E, NW cor. SW SE ..... Rigging up.

PIKE COUNTY

E. R. Henderson's No. 1 Tilyou, 660 ft. W, 500 ft. S, NE cor. NE SE, Sec. 26-3-14 ..... T.A. 2,909 ft.

E. R. Henderson's No. 1 J. L. Lee, 400 ft. S, 350 ft. E, NW cor. SW SE, Sec. 21-3-24 ..... S.D; W.O. 1,020 ft.

E. R. Henderson's No. 1 W. B. East, 200 ft. S, 150 ft. W, NE cor., Sec. 13-9-23 ..... S.D. 338 ft.

Powell Creek O. & G. Co.'s No. 1 Kloss, NE SW, Sec. 3-4n-6w ..... Partly rigged up and S.D.

SCOTT COUNTY

Heavener O. & G. Co.'s No. 1 Riser, Sec. 36-4-26 ..... S.D; T.D. 1,436 ft.

Waldron O. & G. Co.'s No. 1 White, NE cor. SW NW, Sec. 17-3n-29 ..... S.D; waiting on csg. 1,860 ft.

SEVIER COUNTY

Tristate Oil Co.'s No. 1 McCown, Sec. 24-8-32, S½ SW... Location.

UNION COUNTY

Drillers Oil & Dev. Co.'s No. 1 Pickering, 220 ft. N, 668 ft. E, SW cor. NW NE, Sec. 1-17-16 ..... Arranging to set 6⅝-in. 2,128 ft.

H. H. Helms' No. 1 C. H. Murphy, NE cor. NW NE, Sec. 31-16-14 ..... Rigging up.

Joe Modisette et al's No. 1 W. D. Webb, Sec. 6-18-13, NE cor. NW SE ..... Began Oct. 19; drlg. 50 ft.

Sunby et al's No. 2 Perdue, Sec. 33-16-14, 75 ft. S, 150 ft. E, NW cor. Sec. ..... W.O. 3,247 ft.

WASHINGTON COUNTY
(Cable tools)

C. H. Willoughby's No. 1 Jones, Sec. 34-16-30 ..... S.D. for funds 1,795 ft.

YELL COUNTY
(Cable tools)

Tegmeir & Luckett's No. 1 Falcon, Sec. 36-7-21 ..... S.D. 5,710 ft.

EAST TEXAS

BOWIE COUNTY

Hindeman & Bell's No. 1 Merritt (was Maud-Redwater Oil Co.'s), 175 ft. N, 175 ft. E, SE cor. G. W. Hardidge 100-ac. tr. on Floyd Merritt tr. in Y. S. McKinney Sur. ..... Coring 3,310 ft.

Logan & Elliott's No. 1 Smith, 9,600 ft. S, 2,500 ft. W, NE cor. Chas. Lewis Sur. ..... S.D. 4,505 ft.

Tarkington & Jones' No. 1 W. W. Whybark, 200 ft. S, 200 ft. W, SW cor. J. H. Dyer Sur. ..... Drlg. 1,415 ft.

Lee Timberlake et al's No. 2 Tidwell, 2,510 ft. N, 655 ft. W, SE cor. T. M. Rice Sur. ..... S.D. 3,000 ft.

CAMP COUNTY

McDonald Bros.' No. 1 Tillery, 150 ft. E, 450 ft. S, NW cor. 127-ac. tr. in J. H. Murphy Sur. ..... S.D. 3,600 ft.

CASS COUNTY

J. F. Morrisey's No. 1 T. J. Wilson, 1,088 ft. S of N line, 2,376 ft. E of W line of H.R.S., J. R. McFarland Sur. ..... S.D. 3,670 ft.

Davis & Pigg's No. 1 Roy Brian, SW cor. Roy Bryan 88-ac. tr., Albert H. Latimer Sur. ..... S.D. 2,055 ft.

Everets Drlg. Co.'s No. 1 H. W. Whittington, 200 ft. S and W, NE cor. 69-ac. Whittington tr., L. Strong Sur. ..... S.D. 3,922 ft.

Geo. McKamie's No. 1 R. E. Hall, 150 ft. N, 150 ft. W, SE cor. Hall's 117-ac. tr., H. Buckler Sur. ..... S.D. 4,195 ft.

C. E. Murdock's No. 1 First National Bank, Evans Watson Sur. ..... S.D. 4,390 ft.

John C. Rogers' No. 1 I. E. Lanier, 573 ft. N, 879 ft. W, SE cor. Lanier 86 ac. in K. E. Welborn Sur. .... S.D. 2,280 ft.

John C. Rogers et al's No. 1 W. Q. Henderson, 3,100 ft. S, 3,100 ft. E, NW cor., Wm. Davis Sur. ..... S.D. 955 ft.

United North & South Co.'s No. 1-A Nickelberry, W. A. Irvin Sur., 300 ft. S and E, NW cor., Nickelberry 50-ac. tr. ..... Drlg. 2,780 ft.

HARRISON COUNTY

Lloyd Oil Corp.'s No. 1 E. S. Timmons, 150 ft. from N line to 250 ft. from E line of 105-ac. tr., Findley Sur. ..... S.D. 3,432 ft.

Ryan Consolidated Pet. Corp.'s No. 1 J. M. Fuhr, 1,300 ft. N of NW cor. T. J. Copelin Sur., 1,675 ft. SW at right angles to NW SE line of O'Neal Sur. .. Derrick.

MARION COUNTY

Gist, Claunch & Dodson's No. 1 Miller, 1,470 ft. E line, 725 ft. N line, SW cor. H. Fulgran H.R. Sur. ..... S.D. 300 ft.

Geo. Hindeman et al's No. 1 F. V. Lindsey, 2,500 ft. S, most northerly N line, 2,555 ft. E most easterly W line, Alexander Albright Sur. ..... S.D. 2,380 ft.

PANOLA COUNTY

Hoffer et al's No. 1 Cameron Lbr. Co., center 1,306-ac. tr. in W. M. A. LaGrove Sur. ..... Derrick.

Moses & Wallace's No. 1 Daniel, 600 ft. N and W lines, Mrs. Gerrell 100-ac. tr., SW cor. Isabel Hanks Sur. .. Spudded and S.D.

G. A. Davidson's No. 1 Latham, Wm. Rich Sur. ..... Drlg. 780 ft.

J. L. Nelson et al's No. 1 J. W. Williams, 300 ft. S, 700 ft. W, NE cor. Williams' 67-ac. tr. in Jas. Hanks Sur. ..... S.D. 2,250 ft.

United Gas Public Service Co.'s No. 11 Werner, 1,162 ft. N, 2,418 ft. W, SE cor. D. B. Lewis Sur. ..... Drlg. 4,223 ft.

RED RIVER COUNTY

D. M. Buffington's No. 1 Hossler, E. Hughhart Sur. .... S.D. 2,795 ft.

Johnson Pet. Co.'s No. 2 Randolph, Edw. Dean Sur. ..... S.D. 2,280 ft.

SHELBY COUNTY

I. M. Bradley's No. 1 Ashberry (no check), G. W. Mitchell Sur. ..... Dry and abd. 3,280 ft.

E. L. Chapman's No. 1 Pickering Lbr. Co., C. E. Henry (headright) ..... Set 5 3/16-in. 3,102 ft.

Chapperell Oil Co.'s No. 2 Holt, Matthew Moore Sur. .. S.D. 3,127 ft.

K. H. Francis' No. 1 John Mims, Mary Smith Sur. ..... Coring 2,630 ft.

H. H. Gracey's No. 1 J. A. Morrison, 1,500 ft. N, 200 ft. E, SW cor. J. A. Morris' 109-ac. tr., Wm. English Sur. ..... S.D. 2,600 ft.

Henry Maulding's No. 1 Frost Lbr. Co., NE cor. Frost Lbr. Co.'s 80-ac. tr., A. D. Fountain Sur. ..... Reaming 3,315 ft.

McRoby et al's No. 1 Windham, Wm. Leach Sur., on Windham 296-ac. tr. ..... Coring 2,576 ft.

Ridgeway et al's No. 1 Polley, Domingo Gonzales Sur., 3,180 ft. E of SW cor., 160 ft. N at right angles of Polley 457-ac. tr. ..... Arranging to set surface csg.; T. D. 405 ft.

A. D. Smith's No. 1 Y. D. Carroll-J. A. Parker Sur., 1,500 ft. N, 300 ft. W, SE cor. J. A. Carroll Sur. ... S.D. 3,240 ft.

C. H. Tautenhahn's No. 1 J. C. Bogard, 300 ft. S, 900 ft. E, NW cor. J. C. Bogard's 52-ac. tr., Thomas Baker Sur. ..... S.D. 20 ft; waiting on D.S.

Tenant et al's No. 1 J. Henry, C. Z. Walker Sur. ..... S.D. 3,457 ft.

United North & South Prod. Co.'s No. 1 Windham, 800 ft. W, 1,050 ft. N, SE cor. of Windham 171.5-ac. tr. on A. H. English Sur. ..... Reaming to bottom 2,008 ft.

GULF COAST FIELDS AND WILDCATS

(Continued from Page 39)

Rio Bravo Oil Co.'s No. 19-A Settegast (W.O.), J. Kopman Sur. No. 44, 2,585 ft. S and 285 ft. W of NE cor. "A" lease ..... No report.

Southern Petroleum Co.'s (Tilton et al) No. 1 N. C. Barnes, B.B.B.&C. Sur. No. 1,028, 15 ft. from N line and 25 ft. from W line of Blk. 49, Jones Sub... No report.

HIGH ISLAND—GALVESTON COUNTY

Yount Lee Oil Co.'s No. 20 Cade, N. Fitzsimmons Sur., 161 ft. W of No. 15 and 146 ft. SW of No. 17 ..... Shut down 60 ft.

Yount Lee Oil Co.'s No. 22 Cade, N. Fitzsimmons Sur., 126 ft. S of No. 21 ..... No report.

Yount Lee Oil Co.'s No. 23 Cade, N. Fitzsimmons Sur., 300 ft. S of No. 22 ..... No report.

DAMON MOUND—BRAZORIA COUNTY

Layne et al's No. 8 Wisdom, 155 ft. from NW line and 150 ft. from NE line, Lot 52, Blk. D, Wisdom Subd., A. Darst Sur. ..... No report.

ORCHARD—FORT BEND COUNTY

Gulf Production Co.'s No. 30 Moore, Mark Smith Sur., 400 ft N and 600 ft. W of No. 29 ..... Drlg. gumbo 2,956 ft.

ORANGE—ORANGE COUNTY

Jefferson Prod. Co.'s No. 1 Bland ..... Sandy shale 2,980 ft.; drill stem stuck.

LOCKWOOD—FORT BEND COUNTY

Cullen & West and Gulf Prod. Co.'s No. 2-A Lockwood & Sharp (D.D.) ..... Killed well to deepen; total depth 5,103 ft.

Cullen & West and Gulf Prod. Co.'s No. 3-A Lockwood & Sharp, J. Rabb Sur., 600 ft. E of No. 2-A.. Set 24 ft. screen 3,267 ft. and 12-ft. screen 3,513 ft.; tested salt water; to deepen.

Cullen & West and Gulf Prod. Co.'s No. 4-A Lockwood & Sharp, J. Rabb Sur., 550 ft. W of No. 2-A ..... Derrick.

Cullen & West and Gulf Prod. Co.'s No. 2 H. P. Lockwood, J. Rabb Sur., 300 ft. N and 900 ft. W out of SW cor. 283-acre tract ..... Location.

Cullen & West and Gulf Prod. Co.'s No. 2 A. P. George, J. Rabb Sur., 300 ft. S and 905 ft. E out of NW cor. 200-acre tract ..... Comp. flowing 27 bbls. per hour, 800 lbs. pressure through two ⅝-in. chokes; total depth 5,201 ft.

LOST LAKE—CHAMBERS COUNTY

Pure Oil Co.'s No. 6 Lost Lake, 2,381 ft. W and 289 ft. S of No. 5 in Lost Lake ..... Drlg. sticky shale with streaks of hard lime 3,725 ft.

NASH—FORT BEND COUNTY

Harrison & Abercrombie's No. 15 Nash, Thomas Alsbury S League, 450 ft. E and 75 ft. S of Rycade Oil Corp.'s No. 13 Nash ..... Total depth 4,814 ft.; sidetracking ing stuck drill stem 4,506 ft.

MOSS BLUFF—LIBERTY AND CHAMBERS COUNTIES

Gulf Production Co.'s No. 4 McFaddin, J. McFaddin Sur... Drlg. sand and lime 5,422 ft.

Humble Oil & Ref. Co.'s No. 8 Sterling, James McFaddin Sur., 150 ft. from N line and 1,650 ft. from E line of 512-acre tract ..... Drlg. shale 5,907 ft.

RACCOON BEND—AUSTIN COUNTY

Humble Oil & Refining Co.'s No. 1 Martha Remmert, 221 ft. NW along property line from E cor. Fritz Dieutrich 50-acre tract and 225 ft. NE at right angles, Thos. Bell Sur. ..... Abandoned location.

REFUGIO—REFUGIO COUNTY

Larco Gas Petroleum Co.'s No. 4 Strauch heirs, 150 ft. from N line and 150 ft. from W line, Lot 6, Blk. 2.. Rig.

United Prod. Corp.'s No. 6 O'Brien, 150 ft. from S line of tract, 350 ft. W of No. 3 ..... Oil sand 6,438-51 ft.; twisted off joint drill stem; S.D.; waiting orders.

Moody-Seagraves Prod. Co.'s No. 2-A St. John, Refugio town tract, 600 ft. E of No. 1-A and 300 ft. from N line of lease ..... Cem. 12½-in. casing 466 ft.

United Prod. Corp.'s No. 2-A W. J. Fox, Wm. Hews and L. Brown Sur., 2,099 ft. NE along SE line from SE cor. of lease, thence 1,690 ft. NW at right angles ..... Oil sand 5,186-94 ft.; reaming to test.

SOUTH LOUISIANA FIELDS
LOCKPORT—CALCASIEU PARISH

Vacuum Oil Co.'s No. 32 Miller, 925 ft. E and 480 ft. S of NW cor. S half of NW of Sec. 9-10s-9w ..... Derrick.

JENNINGS—ACADIA PARISH

Jennings Pet. Co.'s No. 2 Eunice Crowley (W.O.), 325 ft. S and 50 ft. W out of the NE cor. of Sec. 42-9s-2w. Sand showing oil 4,254 ft.; cem. casing; standing.

Yount Lee Oil Co.'s No. 10 Housierre-Latrielle, 5,435 ft. E and 1,070 ft. N of SW cor., Sec. 47-9s-2w ..... Hard sand 7,794 ft.; reaming.

SORRENTO—ASCENSION PARISH

Gulf Ref. Co.'s No. 20 United Land Co., 4,040 ft. N and 760 ft. W, SE cor., Sec. 15-10s-4e ..... Rigging up.

HACKBERRY—CAMERON PARISH

Calcasieu Oil Co.'s No. 27 Watkins, 1,150 ft. N and 1,590 ft. W of SE cor. Sec. 13-12s-10w ..... Sand showing oil 2,970-80 ft.; cem. casing.

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Downside up, downside down, vertically, or horizontally—regardless of the position in which you hold Roebling Welding Wire—you can weld with it satisfactorily. This is one of a number of advantages that contribute to the popularity of this wire for general oil field use and pipe line construction.

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ROEBLING WELDING WIRE

Calcasieu Oil Co.'s No. 3 Landry, Sec. 13-12s-10w, 139 ft. from N line of 11-acre tract and 300 ft. E of No. 1.. Cap rock 2,905-70 ft.; plugged to 2,658 ft.; set 1 joint 4¾-in. screen; comp. pumping 125 bbls. daily.

R. E. Seiss' No. 3 Vincent, 2,195 ft. S and 1,220 ft. W of NE cor. Sec. 30-12s-10w ..... Location.
R. E. Seiss' No. 2 J. M. Vincent ..... Shut down 2,162 ft.
J. G. Sutton's No. 2 Irwin, 1,600 ft. W and 200 ft. N of SE cor. NE SE of Sec. 13-12s-10w ..... Sand showing oil 2,985 ft.
Yount Lee Oil Co.'s No. 43 State, 1,690 ft. W and 1,320 ft. N of SE cor. of Sec. 13-12s-10w ..... Set 1 joint screen 3,003 ft.; comp. flowing 500 bbls. ½-in. choke.
Yount Lee Oil Co.'s No. 44 State, 1,110 ft. N and 1,915 ft. W of SE cor., Sec. 13-12s-10w ..... Location.
Yount Lee Oil Co.'s No. 45 State, 1,220 ft. N and 810 ft. W of SE cor., Sec. 13-12s-10w ..... Location.
Yount Lee Oil Co.'s No. 46 State, 1,380 ft. N and 1,555 ft. W of SE cor., Sec. 13-12s-10w ..... Location.
Yount Lee Oil Co.'s No. 47 State, 1,420 ft. N and 1,408 ft. W of SE cor., Sec. 13-12s-10w ..... Location.

VINTON—CALCASIEU PARISH

Marrs McLean's No. 1 Gray (D.D.) ..... Drlg. 1,605 ft.

SWEET LAKE—CAMERON PARISH

Pure Oil Co.'s No. 5 Sweet Lake (D.D.), Sec. 12-13s-8w.. Rigging up to deepen 5,658 ft.

MISCELLANEOUS WILDCATS

TEXAS

AUSTIN COUNTY

O'Hara Oil & Gas Co.'s No. 1 Neilous, J. C. Cummings-Hacienda Sur., 650 ft. N of No. 1 Schroeder in 18-acre tract, north edge Mill Creek ..... Derrick.
Pomacal & Boletka's No. 1 Schebajsa, 329 ft. N, 78 degrees E of N cor. B. Dottery Sur., near center of SW line of S. F. Austin 4 League on west fork of Mill Creek ..... Rig.

BRAZORIA COUNTY

The Texas Company's No. 1 Belcher, 157 ft. from NW line and 223 ft. from SW line Lot 18, Blk. A, Suburban Gardens Subd., Manvel ..... Killing well to deepen 5,483 ft.
The Texas Co.'s No. 2 Belcher, Harvey N. Little Sur., 1,728 ft. southeasterly from N cor. of S half of Sur., along NE line and thence 123 ft. at right angles.... Derrick.
United Oil Syndicate's No. 1 Levitt, 900 ft. from W line and 400 ft. from S line of John Peske Sur. ..... T.D. 1,594 ft. in gumbo; drill-stem stuck.

BURLESON COUNTY

Marek & Son's No. 2 A. Marek, N. McFaddin Sur., 1,068 ft. N and 225 ft. W of SE cor. of tract ..... No report.
Marta et al's No. 1 W. H. Boyett, W. McWilliams Sur., 3,168 ft. N of N cor. of City National Bank 208-acre tract and 300 ft. SE of NW line of Boyett tract.. No report.
Mid-South Oil Co.'s No. 1 Duckworth (W.O.), E of Clay Station ..... Shut down 3,070 ft.

FORT BEND COUNTY

Stone & Wyman's No. 1 Beard, H.&T.C. Sur. No. 118, 1,150 ft. from NW line and 1,892 ft. from NE line .. Shut down 1,275 ft.; 2 joints drill stem lost in hole.

GRIMES COUNTY

Rianjo Oil Co.'s No. 2 Cuthrell, Pat B. O'Connor Sur., C of 110-acre tract ..... Shut down for fuel 2,932 ft.

HARRIS COUNTY

Givens & Daybault's No. 1 Lobit, David Middleton Sur., Blk. 19, Lobit Subd. ..... Drlg. shale 2,305 ft.
Humble Oil & Ref. Co.'s No. 2 Irwin (D.D.), Mykawa, Wm. Lovett Sur. ..... Drlg. shale 6,030 ft.
Humble Oil & Ref. Co.'s No. 5 Minnetex, Mykawa, 150 ft. from S line and 200 ft. from W line, Lot 261, Wm. Lovett Sur. ..... Location.
J. P. Hunnicutt's No. 1 Haney, T. Pitching Sur., 150 ft. out of NE cor. of Geo. E. Haney 730-acre tract ..... Drlg. sand and shale 5,441 ft.
Louisiana Oil & Dev. Co.'s No. 1 J. W. Wilson, W. Ritchie Sur. ..... Location.
Shubert & Alexander's No. 1 Herman Hale, 1,058 varas E of NW cor. R. A. Hanks Sur., thence 790 varas S and thence 70 varas W 74 degrees ..... Shut down in gumbo 2,206 ft.

JACKSON COUNTY

Chicago-Gulf Oil Co.'s No. 9 Drushell, Edna F. Rodriguez Sur., 1,080 ft. N, 58 degrees E No. 8 ..... Gas sand 2,635-40 ft.; cem. casing.

JEFFERSON COUNTY

Humble Oil & Ref. Co.'s No. 1 Nelson, Wm. Rice Sur., 550 ft. from N line and 50 ft. from E line of W half of 1,071-ac. tract ..... Drlg. shale 1,975 ft.
John I. Pipkin and Elam's No. 1 Broussard, McGaffey Sur., 800 ft. from S line in center E and W of 206-ac. tract ..... Rig.
Texas Gulf Sulphur Co.'s No. 1 Thompson, Fannett, Wm. Smith Sur., 1,950 ft. W and 1,600 ft. S of NE cor. of Thomas 446-acre tract ..... Sulphur test.
Texas Gulf Sulphur Co.'s No. 5 Thomas, Fannett, Wm. Smith Sur., 300 ft. W and 1,200 ft. N of SE cor. of E 446-ac. tract ..... Sulphur test.
Westbury Oil Co.'s No. 4 West, 450 ft. W and 4,210 ft. S of NE cor. of T. D. Yoakum Sur. ..... Drlg. 900 ft.

LIBERTY COUNTY

L. B. House's (I. R. Ingram) No. 1 C. T. Palmer, James Fenner Sur., 1,000 ft. from W line and 850 ft. from S line of tract ..... No report.
Hamm et al's No. 1 Harvard, Davis Hill ..... Gumbo 1,015 ft.; S.D.

MATAGORDA COUNTY

United North & South Oil Co.'s No. 1 Stoddard, J. C. Keller Sur., 150 ft. W and 545 ft. N of SE cor. Blk. 53, Buckeye townsite ..... Drlg. sandy lime 2,846 ft.
Harvey Smith's No. 1 Baker (Citrus Grove), J. V. Criswell Sur., Robbins Subd., 2,000 ft. S and 2,000 ft. E of NW cor. of Lot 14 and Lot 15 ..... Spudded.

MONTGOMERY COUNTY

Hogg Bros.' No. 1 Sealey, Jas. Pevehouse Sur., 1,575 ft. N of N line of Horton & Woodson's 1,562-ac. tr., and 2,226 ft. E of W line of H. & W. 1,870-ac. tr... Rig.
Humble Oil & Ref. Co.'s No. 1 W. A. Penn, 750 ft. from N line and 900 ft. from E line of S. J. McFarland Sur. ..... Drlg. sandy shale 3,568 ft.
Stanolind Oil & Gas Co.'s No. 1 R. M. Gary, Jacob Shannon Sur., 150 ft. SW of SW cor. D. Pitts 91-acre tract in R. M. Gary 633-acre tract ..... Rigging up.
Strake et al's No. 1 South Texas Dev. Co., 468 ft. in westerly direction along N line of Theo. Slade Sur. from SW cor. of A. McGowan Sur., and thence 750 ft. in southerly direction at right angles from said line in Slade Sur. ..... Shale 4,153 ft.; reaming.

ORANGE COUNTY

Altex Oil Co.'s (Veteran Oil Co.) No. 1 Reed, A. Nelson Sur. No. 1, 500 ft. from N line and 250 ft. from E line of tract ..... T.D. 4,063 ft.; sidetracked 1,200-2,200 ft.; S.D.
Crew Oil Co.'s No. 1-A Mansfield, 50 ft. E of No. 1 ..... S.D. 1,710 ft.

POLK COUNTY

Freeman et al's No. 2 Freeman ..... S.D. 3,162 ft.
T. B. Hoffer's No. 1 Saner-Ragly Lbr. Co., 300 ft. out of most northerly cor. of most easterly County School Land Abst. 371 ..... No report.
Trans-Coastal Oil Co.'s No. 1 M. E. Roberts, J. F. Rumayor Sur., 350 ft. from W line and 150 ft. from N line of tract ..... S.D. 734 ft.

REFUGIO COUNTY

Blanco Creek Oil Co.'s No. 1 Damaan, 150 ft. from N line and 150 ft. from W line of Blk. 14, Bonnie View Ranch Subd. ..... Shut down 4,627 ft.

Humble Oil & Ref. Co.'s No. 1 O'Connor, John Keating Sur., 6,012 ft. S from NE cor. along SE line of Lon T. Ross Sur., thence 7,375 ft. W at right angles in John Keating Sur. ..... Trying to pull stuck drill stem 3,814 ft.

SAN JACINTO COUNTY

H. P. Edwards' No. 1 J. R. Bennett, Cold Springs ..... S.D. 750 ft.

TRINITY COUNTY

Scientific Producers Co.'s No. 1 Thompson, I.&G.N. Sur. No. 47, 50 ft. out of NE cor. of H. K. Thompson 199-ac. tr. ..... Rig.

TYLER COUNTY

King Oil Co.'s No. 1 Caswell ..... Sand and shale showing oil 1,255 ft.; cmtd. 6-in. csg. 1,218 ft.

Allied Pet. Co.'s (Texas Southern Pet. Co.) No. 3 Wilson, Mrs. E. Cherry Sur. No. 798, 1,500 varas from W line and 600 varas from N line ..... Fishing 5,025 ft.

VICTORIA COUNTY

Bunte et al's No. 1 Keeran, 3,714 ft. NE along railroad from SW line of Martin DeLeon Sur., and thence 1,600 ft. NW at right angles ..... Drlg. shale 969 ft.

Houston Oil Co.'s No. 1 Conrad, T.&N.O. Sur. No. 1, 1,100 ft. from SW line and 100 ft. from NW line.... Washing down 5,176 ft.

The Texas Company's No. 3 McFaddin, S 15 degrees W, 6,200 ft. and N 75 degrees W, 1,850 ft. out of NE cor. John M. Rine Sur. ..... Cored sand 4,531-50 ft.; to make drill stem test.

WALKER COUNTY

George C. Meredith's No. 1 Thompson Lumber Co., Jose Ortega Sur., approx. 5,000 ft. NE along SE line of property and approx. 1,660 ft. NW at right angles... Location.

WALLER COUNTY

McDaniel and associates' No. 1 Citizens State Bank, B.B.B.&C. Sur., C of 150-ac. tract ..... Rig standing.

WASHINGTON COUNTY

Moon & Yeager's No. 1 Hahn, 500 ft. from N line and 1,852 ft. from W line of J. H. Alcorn Sur., Abst. 3.. Drlg. sandy shale 3,558 ft.

Penn-Tex Oil Co.'s No. 2 Kamah Brenham, S. M. Williams Sur. ..... Shut down in anhydrite 3,490 ft.

WHARTON COUNTY

Beard & Brumblow's (Shibe & Gray) No. 1 Brown (W.O.), S of El Campo ..... Shut down 3,041 ft.; repairing rig.

W. H. Wallace et al's No. 1 Lee, 600 ft. S and 800 ft. W from NE cor., Sec. 18, G.H.&H. Sur. ..... Drlg. gumbo 2,701 ft.

SOUTH LOUISIANA

ASCENSION PARISH

McElroy Petroleum Co., 150 ft. S and 150 ft. W of NE cor., Sec. 29-10s-4e ..... Shut down 4,070 ft.

Crawford Doyle's No. 1 Johnson, Sec. 23-9s-13w ..... S.D. 875 ft.

I. O. Davis' No. 1 Industrial, Sec. 29-9s-10w ..... Standing 6,568 ft.

Wilfred Lahay's No. 1 Jardell, Sec. 16-10s-12w ..... S.D. 3,650 ft.

Success Oil Co.'s No. 1 Hewitt, 90 ft. out of SW cor., Sec. 11-9s-11w ..... Rig.

Vacuum Oil Co.'s No. 1 Wait (D.D.), 225 ft. out of SE cor., Sec. 12-9s-7w ..... Set 1 joint 5-in. screen, 13 ft. 5-in. liner in sand 6,958-71 ft., with 2½-in. tubing to top; comp. flowing 1,500 bbls. pipe line oil, ⅝-in. choke, 650 lbs. pressure on tubing and 760 lbs. on casing; gravity of oil 42° (cor.); T. 80°; on Oct. 24 flowing 65 bbls. hourly through two ⅝-in. chokes, 1,400 lbs. pressure on casing and 1,200 lbs. on tubing.

IBERIA PARISH

Jefferson Lake Oil Co.'s No. 1 Lake Peigneur, Sec. 58-12s-5e, 300 ft. NW of No. 20 ..... Sulphur test.

Jefferson Lake Oil Co.'s No. 22 Lake Peigneur, Sec. 58-12s-5e, 600 ft. NW of No. 21 ..... Sulphur test.

Jefferson Lake Oil Co.'s No. 23 Lake Peigneur, Sec. 58-12s-5e, 600 ft. NW of No. 22 in line with No. 21.. Sulphur test.

Jefferson Lake Oil Co.'s No. 24 Lake Peigneur, Sec. 58-12s-5e, S 600 ft. 79 deg. 30 min. W of No. 23 ..... Sulphur test.

IBERVILLE PARISH

Standard Oil Co.'s No. 1 Myrtle Grove-Wilbert, Bayou Choctaw, Sec. 52-9s-11e, 250 ft. W No. 1 Gray ..... Salt 2,566-2,712 ft.; plugged to sand 2,410-73 ft.; standing 1,000 ft. oil and 400 ft. water in the hole; to pump.

Standard Oil Co.'s No. 2 Myrtle Grove-Wilbert, Bayou Choctaw, 2,040 ft. N and 600 ft. W of center of Sec. 52-9s-11e ..... Derrick.

Standard Oil Co.'s No. 2 Gay, Bayou Choctaw, 4,500 ft. N and 600 ft. E of SW cor. SE of Sec. 52-9s-11e ..... Location.

Standard Oil Co.'s No. 6 Schwing, Bayou Blue, Sec. 73-9s-11e, 317 ft. S of No. 2 ..... Drlg. hard sand rock 5,510 ft.

LA FOURCHE PARISH

State Production Co.'s No. 1-C Mrs. W. H. Stark, Sec. 71-15s-15e ..... Sulphur test.

The Texas Co.'s No. 3 La.L.&E., Leesville, 4,439 ft. S and 468 ft. E of NW cor., Sec. 26-21s-22e ..... Rigging up.

PLAQUEMINES PARISH

Humble O. & R. Co.'s No. 5 Cockrell-Moran, Lake Grand Ecaille, 10,377 ft. N and 2,614 ft. W of NE cor. of Twp. 21s-26e ..... Location.

Humble O. & R. Co.'s No. 6 Cockrell-Moran, Lake Grand Ecaille, Twp. 21-26e, 5,000 ft. E of Washington Sta. ..... Drlg. lime, cap and shale 1,304 ft.

TERREBONNE PARISH

La. Gas & Fuel Co.'s No. 2 Minor, 3,480 ft. S and 1,980 ft. E of NW cor., Sec. 3-18s-16e ..... Drlg. 2,906 ft.

The Texas Company's No. 2 La.L.&E., Bay Junop ..... Drlg. sticky shale and lime 3,067 ft.

The Texas Company's No. 4 La.L.&E., Bay Junop ..... Location.

The Texas Company's No. 10 State, Lake Barre ..... Location.

The Texas Company's No. 11 State, Lake Barre ..... Drlg. hard sand and boulders 1,557 ft.

The Texas Company's No. 12 State, Lake Barre ..... Location.

The Texas Company's No. 14 State, Lake Barre ..... Location.

The Texas Company's No. 1 La.L.&E., Lake Barre, 2,645 ft. S and 595 ft. E of NW cor., Sec. 30-21s-20e.. Location.

VERMILLION PARISH

Pure Oil Co.'s No. 2 Southwest Louisiana Land Co., 1,300 ft. E and 300 ft. S of NW cor. Sec. 4-12s-1w... Drlg. shale and sand 5,953 ft.

WEST FELICIANA PARISH

Putnam Syndicate's No. 2 Como Plantation, Sec. 51-1s-4w. Shale and lime 2,050 ft.; waiting on 8¼-in. csg.

WILDCAT OPERATIONS IN OKLAHOMA

(Continued from Page 35)

LINCOLN COUNTY

Hilton Phillip's No. 1 Phillips, SW NW, Sec. 2-14-3 .... Drlg. 800 ft.

Mote et al's No. 1 School Land, NW cor., Sec. 36-17-5 .. Drlg. 530 ft.

McINTOSH COUNTY

Patterson et al's No. 1 Smith, SW cor. NW SE, Sec. 32-9-16 ..... Drlg. 5,782 ft.

MURRAY COUNTY

Capitol Prod. Co.'s No. 1 Cutchall, SE NE, Sec. 6-1-2 .... S.D. 2,425 ft.

MUSKOGEE COUNTY

Sioux Oil Co.'s No. 1 Unknown, NW SE, Sec. 21-11-19 .. S.D. 1,011 ft.

OKFUSKEE COUNTY

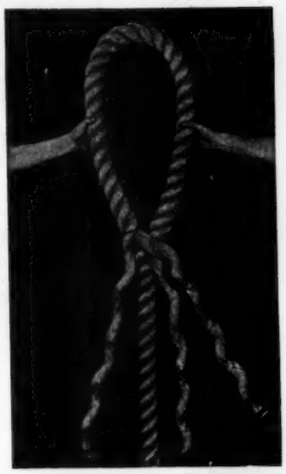
Shepard et al's No. 1 Neveas, SE NW SW, Sec. 3-12-10.. S.D. 3,838-90 ft; Wilcox sand; hole full wtr.

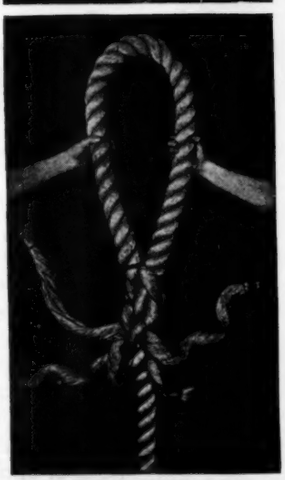
Here's the best splice for the best bull rope . .

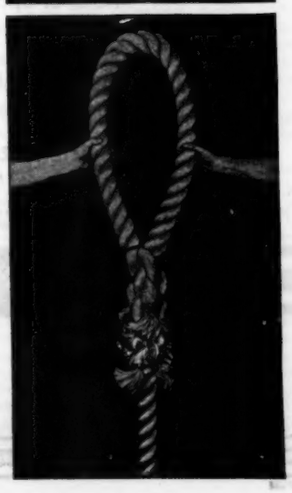
PLYMOUTH

"Bronzo" Manila Bull Rope

"the rope you can trust"







No, Sir! The Plymouth Cordage Company overlooks no opportunity to make every Plymouth "Bronzo" Manila Bull Rope produced give you maximum service! *First*, quality fiber and superior construction . . . *Second*, the specially developed "Bronzo" lubricant treatment to resist friction and abrasive wear . . . *And third*—we prescribe the *"tucked"—not* "rolled" splice, for eyes. The proper method is:

Serve rope far enough back to make four tucks. After rope is opened up, serve or whip ends of each strand. Use full size strand for first two tucks. Remove outside layer of yarns for third tuck and next outside layer for fourth tuck. Draw tucks down perfectly even and the rope won't draw.

This method—with Plymouth "Bronzo" Manila Bull Rope—gives you the best bull rope service money can buy.

Free booklets on handling and splicing are yours for the asking at any Oil Well Supply Co. store.

PLYMOUTH CORDAGE CO.
North Plymouth, Mass.
OIL WELL SUPPLY CO., *Distributors*
Stores in All Oil Fields

PLYMOUTH TRADE MARK 1824

11 YEARS under water... PABCO covering *and* pipe still in perfect condition

Right: 11 YEARS under the Sacramento River at Sacramento, California, and when mud and PABCO Covering were removed, as shown in foreground, pipe was in perfect condition.

Left: Looking across Sacramento River towards Pacific Gas & Electric Co.'s plant. Shows location where 6-inch PABCO wrapped pipe line was removed because of U. S. Government dredging operations.

Once more Pabco Protection proves its efficiency under most trying conditions.

When the U. S. Government started deepening the Sacramento River channel at Sacramento, California, the Pacific Gas & Electric Company's 6-inch pipe line under the river had to be removed.

Laid in September 1920, removed in August 1931. 11 years and no sign of pitting of the pipe—the original life, flexibility and waterproof qualities of the PABCO Covering giving as efficient protection as when new.

For over 25 years we have been the leaders in developing pipe protection methods and protective service. In the field, or applied at the mill, no other method can give you PABCO results.

The advantages of the PABCO Method **as applied to your specific problems** will be explained by one of our competent engineer representatives, at your request.

THE PARAFFINE COMPANIES, INC.

LOS ANGELES · SAN FRANCISCO · PORTLAND · SEATTLE · KANSAS CITY
SOMERVILLE, N. J. · NEW YORK CITY · LONDON, ENGLAND · SYDNEY, AUSTRALIA

Manufacturers of Pabco Multi-Service Paints, Varnishes, Lacquers and Enamels, Pabco Waterproofing Paints and Compounds, Mastipave, Pabco 10, 15 and 20 Year Roofs, Multhoid Membrane Dampcourse, Pabcobond and Other Products

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PABCO Method of PIPE PROTECTION

OKLAHOMA COUNTY

Citizens Oil Co.'s No. 1 Sage Barber, NE cor., Sec. 21-11-3w ..... S.D. 1,200 ft.
L. C. Hivick's No. 1 Sunset Addition, NW SW NW, Sec. 17-11-3w ..... S.D. 5,515 ft.
J. F. Cuniff, tr.'s No. 1 Church Land, NE NW SE, Sec. 17-12-4w ..... S.D. 6,700 ft.

PAWNEE COUNTY

Rookstool's No. 1 Wylie, NW NE SW, Sec. 6-20-5 ..... S.D. 1,950 ft.
Cochran et al's No. 1 Green, NE cor. SW, Sec. 15-23-5 .. Rig.

PITTSBURG COUNTY

Tape Oil Co.'s No. 1 Fulton, SE, Sec. 34-7-14 ..... S.D. 1,200 ft.
J. Morrison's No. 1 Fowler, NE SE, Sec. 13-7-17 ..... Rig.
C. Kennedy's No. 1 Travis, C SW NE, Sec. 15-7-14 ..... Rig.
C. Canady's No. 1 Jones, NW cor., Sec. 14-8-14 ..... Rig.

ROGER MILLS COUNTY

Ute Oil Co.'s No. 1 Williams, C SW, Sec. 23-12-24w .... S.D. 5,150 ft.
L. C. Hivick's No. 1 Davis, C NW NE, Sec. 4-11-26w .... S.D. 3,275 ft.

SEQUOYAH COUNTY

Braman Oil Co.'s No. 1 Unknown, C NW SW, Sec. 29-12-22 ..... Drlg. 910 ft.

WASHITA COUNTY

Cooper & Terhune's No. 1 Blocker, NW cor., Sec. 29-8-19w ..... S.D. 2,440 ft.
Burns & Prince's No. 1 Deck, SW cor., Sec. 21-8-18 .... S.D. 1,140 ft.

OKLAHOMA PANHANDLE

TEXAS COUNTY

Three Way Oil Co.'s No. 1 Crane, SW NW, Sec. 11-1-1B .. S.D. 4,750 ft.

SOUTHERN OKLAHOMA

ATOKA COUNTY

Morris et al's No. 1 Mansell, SW NW NW, Sec. 9-2s-12 .. S.D. 285 ft.
Brookshire's No. 1 R. W. Rowland, NW NE SE, Sec. 18-3s-10 ..... S.D. 1,530 ft.

BRYAN COUNTY

Bryan County Oil's No. 1 Childs, NW SE SW, Sec. 7-7-10 .. T.D. 650 ft.
Bush et al's No. 1 Commerce Trust, NE cor., Sec. 35-6s-9 ..... T.D. 740 ft; plugged back to 450-80 ft.

CHOCTAW COUNTY

Hobson Bros.' No. 1 McChristian, NW NE NE, Sec. 12-6s-19 ..... S.D. 730 ft.

JEFFERSON COUNTY

Smith's No. 1 McCarty, SE NW NE, Sec. 18-4s-8w ..... Location.

LOVE COUNTY

Autrey et al's No. 2 Cross, CWL SE NE, Sec. 27-6s-2 .. Show oil and gas 970-72 ft. and 1,324-34 ft; S.D; T.D. 1,634 ft.

MARSHALL COUNTY

Everette et al's No. 1 Agres, SE NE, Sec. 14-7s-6 ..... Drlg. 325 ft.
Summers-Sellers' No. 1 Beams, NE SW NE SW, Sec. 20-7s-5 ..... Rig.
Dixson's No. 1 McDuffel, SW SE, Sec. 3-7s-6 ..... S.D. 1,167 ft.
Tallaferro et al's No. 1 fee, NW SE SE NW, Sec. 34-5s-5 ..... Landing csg.; T.D. 580 ft.

McCURTAIN COUNTY

The Oil Journal's No. 1 Parks, C NE SW, Sec. 17-6s-23 .. Abd. 1,014 ft.
Stewart's No. 1 Patterson, C SE SE, Sec. 7-6s-24 ..... S.D. 756 ft.

PUSHMATAHA COUNTY

George's No. 1 Lane, NW SE, Sec. 32-3s-15 ..... S.D. 840 ft.
Whitehead et al's No. 1 Messer, SE SW SW, Sec. 35-3s-18 ..... Rig.

STEPHENS COUNTY

Brown's No. 1 Hightower, SW SE NE, Sec. 15-3s-5w ... Sand 990-1,004 ft; S.O.; S.D.

CANADIAN FIELDS

(Continued from Page 47)

lot of trouble with caving, and is preparing to run casing.

Central Turner Valley

In Central Turner Valley, McLeod Oil Co.'s No. 3, LSD 16, Section 1-20-3w5, has discontinued work after deepening in the lime to 5,245 feet. No great improvement is reported in gas production, and indications are that increased production can be secured only by deepening several hundred feet more to the lower horizon in the lime. The outfit has been moved to McLeod's No. 4, same LSD. This test was carried to around 5,230 feet and got a second producing horizon in the limestone; it has been making 25 to 30 bbls. a day settled production. The hole is reported in good shape for deeper drilling, and will probably be carried down to test the still lower horizons of the Madison limestone.

Imperial Drilling

In South Turner Valley, Sterling Pacific Oil Co.'s No. 2, LSD 10, Section 33-18-2w5, is drilling below 4,785 feet. This is the only Imperial test now active in the Turner Valley Field.

On the Lethbridge structure, southern Alberta, Texas-Imperial's No. 1 wildcat, LSD 14, Section 22-8-22w4, is drilling at 3,818 feet.

Mr. Stillman Gives Statement

C. O. Stillman, president of Imperial Oil, Ltd., visited Calgary recently when he made public a statement dealing with the restricted output in the Turner Valley Field. He stated that the restrictions were indirectly an outcome of world-wide conditions.

"For many years," said Mr. Stillman, "our company has given material evidence of its desire to establish adequate sources of supply of crude oils in Canada. We must admit that in spite of very large expenditures we have failed to find adequate supplies of crudes suitable for the manufacture of products other than gasoline, such as kerosene, fuel oil, road oils and asphalt. The greatly reduced consumption of gasoline is the reason Turner Valley purchases had to be restricted. Turner Valley naphtha is suitable only for the manufacture of gasoline, and even then, to make a satisfactory motor fuel, the volatility has to be corrected by adding heavier gasoline. The situation today is that the valley can produce more naphtha than the market can absorb, and so there is no alternative but to restrict purchases.

"To use as much Turner Valley naphtha as possible, it is the practice of Imperial Oil to minimize the production of heavy gasoline from the crudes which must be imported for the manufacture of products other than gasoline. Not only is the competition of foreign crude with the Turner Valley product held to the irreducible minimum, but whereas purchases of the Turner Valley naphtha have been curtailed by 50 per cent, imports of crude to the Calgary refinery have been reduced considerably more than 50 per cent.

"So that the burden of restricted purchases in the valley would rest as lightly as possible upon the independent producers, Imperial Oil curtailed by one-half purchases from its own subsidiary companies, which account for approximately half of the valley production. It did this before it restricted purchases from independents. This is evidence that a spirit of absolute fairness ruled. An important factor in the difficulties of the Turner Valley is the greatly reduced consumption of gasoline in western Canada this year."

Mr. Stillman stated that his company would be a ready participant in any equitable plan that might be devised to conserve resources in the Turner Valley. "No one could be more desirous than we are to have the field operate on such a basis that over a period of years the maximum benefits will accrue to all parties, both consumers and producers," said Mr. Stillman.

Tests in the Foothills

On the Moose Mountain structure, Graystone Consolidated's No. 2 Signal Hill, LSD 9, Section 34-23-5w5, is being put in shape for deeper drilling. A. P. Phillips is now in charge of the drilling, with two crews. Pipe has been pulled and the 4-inch hole is being enlarged to 6½ inches in order to land the 6¼-inch pipe in the Dalhousie sand, where crude oil is expected. Elbow Oils' No. 1, LSD 11, Section 35-22-5w5, is at 3,240 feet with pipe cemented at 3,190 feet, and will resume shortly with 10-inch tools and drill open hole.

On Fisher Creek, Cotton Belt Mines' No. 1, LSD 5, Section 21-21-4w5, has a fishing job in the Dalhousie sand below 2,400 feet. Gas was struck at the Dalhousie contact with traces of oil, and a further flow of gas is reported in the Dalhousie.

On the Pincher Creek structure, Weymarn Petroleums' No. 2, LSD 5, Section 7-6-1w5, is standing cemented around 3,900 feet and preparing to resume drilling.

Border Fields

On the Milk River structure, southern Alberta, Commonwealth Petroleums' No. 1, LSD 9, Section 9-3-15w4, is at 5,020 feet and installing new drill line, after making hole slowly in a hard shale and sand formation. The outfit is running two shifts and the tight formation shows considerable oil impregnation. A porous horizon in the limestone is expected around 5,035 to 5,040 feet.

East of Coutts, Mayland Southern's No. 1 LSD 13, Section 4-1-9w4, is at 2,450 feet and held up by caving. Casing has been run to 2,020 feet.

On the Twin River structure, Parco-Nordon's No. 1, LSD 16, Section 34-1-20w4, is drilling below 3,250 feet, and making hole very rapidly.

Hudson's Bay Test

In the Keho Lake area, southern Alberta, Hudson's Bay Oil & Gas Co.'s No. 1, LSD 2, Section 17-11-22w4, is drilling in the lower Ellis below 4,914 feet, and getting close to the Madison contact.

Red Coulee Field

On the Montana end of the international Red Coulee structure, Askalta Oils' No. 2 Farbo, SW NE Section 2-37-4w, is reported drilling around 2,000 feet. Cosmos Petroleum Co. is preparing to drill its No. 3 Farbo offsetting Askalta's No. 1 producer to the south.

Ribstone Field

Following completion of Rayco Oils' No. 1 and Algonguin-Commonwealth's No. 2 as dry holes, no new drilling has been undertaken in the Ribstone Field, east central Alberta. Ribstone Oils, Ltd., is continuing production from the three Meridian wells and Imperial's No. 2. The four wells in August delivered an aggregate of 1,635 bbls. of heavy crude, or better than 50 bbls. a day; and production for the eight months ending August 31 was 6,645 bbls. Flush production was estimated at 100 bbls. a day for each well, and the company is reported to be securing a pumping expert to study the wells with a view to getting maximum production. The crude is trucked to Rivercourse, where it is delivered to the C.P.R. for fuel oil purposes.

British Columbia Drilling

In the Kelowna district, British Columbia, Okanagan Oil & Gas Co.'s No. 1, E half Section 2-26-Osoyoos, about 9 miles southeast of Kelowna, is reported drilling below 1,958 feet with a show of gas. Since the 8-inch casing was set at 1,705 feet the drill has passed through 100 feet of blue calcareous formation, 35 feet of blue calcareous sandy shales and 18 feet of dark gray sandy shales. The latter is the gas horizon in which the test is now drilling, and is reported to show some similarity to the gas sand of the Viking Field in Alberta.

In the Cariboo district, Patrick Syndicate's test near Australian is unofficially reported around 1,400 feet. This is the only test so far started in the Quesnel district, and is claimed to have secured shows of oil, though there is no commercial production. Preliminary reports on the Cariboo-Quesnel area a year and more ago indicated good prospects of oil; and the area was also investigated by a joint survey of the British Columbia government and the railroads whose report, however, has not been made public. Extensive leasing was done more than a year ago, and additional acreage was leased following reports of oil in the Patrick well. Later, the provincial government withdrew the area from leasing. Early geological estimates indicated a potential oil horizon between 2,000 and 3,000 feet, and it is probable the Patrick test will have to be carried to at least the former depth.

Moose Jaw Project

Following the proposal to import natural gas from Alberta and Montana, the city of Moose Jaw, Saskatchewan, is preparing to deepen a test well drilled some years ago to a depth of 3,302 feet. The test was originally started for a water well, but the deeper drilling was in the expectation that gas would be struck. The city is securing geological advice in regard to deepening and is reported to have made tentative arrangements with an Alberta drilling contractor to complete the well.

Manitoulin Island Prospect

Reports of the discovery of crude oil in a schoolyard well at Sandfield, on Manitoulin Island, have revived interest in that area as an oil prospect. The well was 60 feet deep, and samples from it were sent to Petrolia for analysis; and it is possible that active development work will be undertaken.

Manitoulin Island, in Lake Huron, has been known as an oil prospect for many years. The first drilling was done near Manitowaning, in the east end of the island, before 1870 four tests getting only a small production. In 1907 several wells drilled near Little Current got shows of oil in a close-grained rock between 500 and 700 feet, the showings being improved by shooting; while production secured near Gore Bay was too light to justify pumping. In 1913 a syndicate headed by Senator Paschal Poirier of Nova Scotia drilled near Green Bay and Sheguindah when oil showings were again encountered. A number of wells at various times are stated to have indicated a good flush production but failed to hold up.

Throughout the greater part of the island the geological formations underlying the glacial drift consist of Niagara limestone. The Clinton outcrops in an east-west belt across the island, and a broader belt in the north half is composed on the surface of Lorraine shales. the Medina being apparently absent. Oil showings apparently come from the Trenton limestone, at depths ranging from 160 to 400 feet. The oil is a high-grade crude, very similar to the Petrolia product. Drilling so far has been done in areas where the Trenton is near the surface, and some geologists consider that tests located where the Trenton is well covered by impervious formations will stand a good chance of getting commercial production.

Ontario Operations

In the Niagara-Haldimand area the Contact Natural Gas Syndicate is reported preparing for active development work on holdings in North Cayuga Township, Haldimand County. Cobalt Contact Mines, Ltd., of Toronto holds a substantial interest in the natural gas syndicate. The Cayuga area has been producing nautral gas for many years, and arrangements are now being made for drilling a series of wells which are expected to get production between 500 and 600 feet.

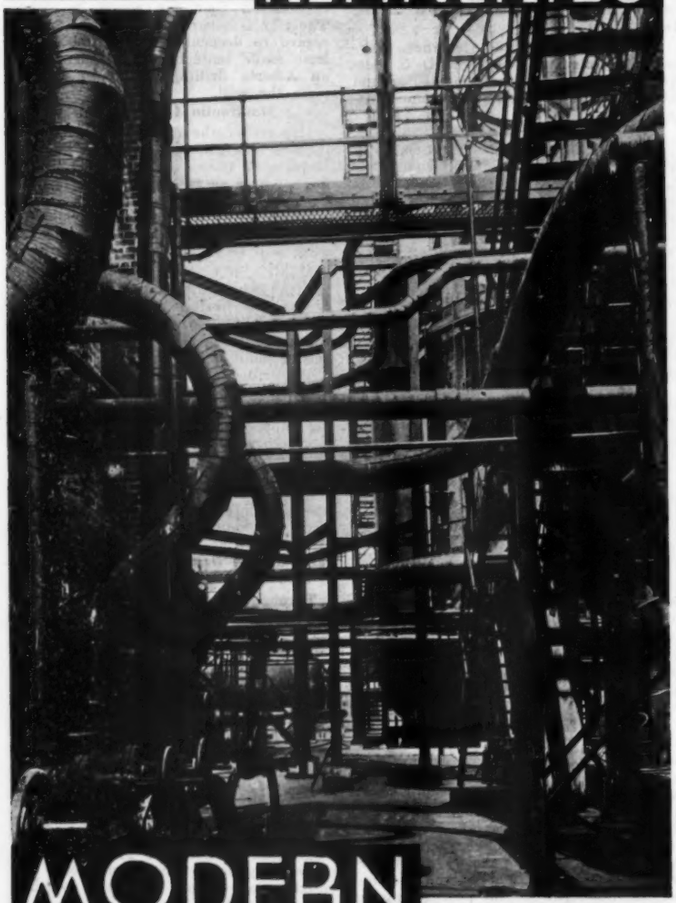
In Kent County, Ontario, Ralph Dawson's test on the Smart farm, Lot 4, Concession 16, Tilbury East Township, drilled into water around 1,340 feet. It was plugged and shot in the Tilbury sand, developing production of around 100,000 feet a day which will be taken by the Southern Ontario Gas Co.

In Raleigh Township, Kent County, Olga Oil & Gas Co.'s No. 3, Lot 19, Concession 8, is reported drilling around 1,400 feet.

In Middlesex County, Union Gas Co.'s No. 1 Ekfrid, Lot 7, Concession 5 south, Ekfrid Township, is drilling in the Trenton limestone around 3,400 feet, approximately 720 feet in the lime. A show of gas in the upper sands between 1,175 and 1,180 feet petered out, and nothing has been encountered in the Trenton. The test will likely be continued to the granite.

Union Gas Co.'s No. 2 Ekfrid has been located in Lot 10, Concession 6, Caradoc Township, Middlesex County, about 10½ miles due north of No. 1 and some 18 miles northeast of the Southern Ontario's drilling in Mosa Township near New-

MODERN REFINERIES



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POWER PIPING CO., Pittsburgh

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Put It Up To Power Piping

bury. Drilling rig is being moved in for No. 2 Ekfrid.

Peninsular Petroleums, Ltd., of Toronto, formed in 1929 to develop oil acreage in the Wainwright Field of Alberta, is turning its attention to the Niagara peninsula of Ontario. Arrangements have just been concluded for financing a series of tests to be drilled on acreage near Hamilton which has been secured from E. P. Rowe of Toronto. Gas production, for which there is a ready market, is expected at shallow depth, approximately 500 feet, and producers drilled in the same general area are reported to have shown production from 50,000 to 200,000 feet a day. Drilling will likely be started this fall.

Turner Valley Conservation

Negotiations in reference to the unitization scheme for operation of the Turner Valley Field are still in progress. Representatives of the independent oil operators conferred with the provincial government in reference to an increase of the 100,000,000-foot maximum permitted flow from the field, as well as the project for piping waste gas to Saskatchewan, Montana or British Columbia. Government representatives intimated that, even if the flow were increased to 200,000,000 feet a day, the pipe line scheme would not be practicable in view of the absence of any assurance of sufficient gas reserves. The details of the unitization agreement are now being studied by the independent operators, and efforts will be made to secure some modification of its terms.

OKLAHOMA FIELDS

(Continued from Page 35)

adopt new methods of producing the oil to combat water intrusion. A total of 118 wells are now showing water since the reopening of the field, and some from the Wilcox sand horizon. Many of the wells are yet to be tested that have not been on production since the military shutdown was lifted.

A shallow gas area has been discovered north of Tulsa in Township 23-13, Washington County. A block of 7,600 acres has been secured by K. K. Kimball in the township on which shallow wells will be drilled to supply markets in the surrounding town with gas. The gas is found in the shale at 630 feet and the wells make approximately 150,000 to 200,000 feet of gas a day. A geological survey has been made of the area and favorable indications have ben found.

Seminole Production

The production from the Greater Seminole area for the week ending October 23, was approximately 138,260 bbls. The first 12 pools listed below comprise the Seminole area which averaged 104,955 bbls:

Pool—	Bbls.
Little River	18,665
East Little River	3,245
Carr City	10,620
Maud	1,895
Mission	6,870
Bowlegs	12,375
Earlsboro	13,745
South Earlsboro	3,855
East Earlsboro	14,705
Seminole	14,230
East Seminole	1,240
Searight	3,510
Total	104,955
Allen	8,105
Asher	815
Wanette	2,105
Konawa	2,215
Sasakwa	2,765
St. Louis-Pearson	17,280
Total	138,260

The daily production and pipe line shipments from the Oklahoma City Field for the week ending October 24, were as follows:

Date—	Prod.	Wells	Shipments
October 18	60,817	78	132,963
October 19	92,032	81	123,233
October 20	75,253	78	72,150
October 21	196,520	105	131,582
October 22	148,836	103	124,513
October 23	196,704	114	155,006
October 24	235,113	112	189,427

Creek County

Elson and others moved a machine in for No. 1-A Gage, SW cor. NW, Section 31-19-9. Baltzell and others' No. 1 S. Lyons, SE cor. NE, Section 11-18-11, is a machine. Magnolia Petroleum Co. is building the rig for No. 5 S. M. Boone, CEL SW SE, Section 34-17-7, to deepen from 1,529 feet. Wilrough and others' No. 2 Stewart, CWL NW NE, Section 32-17-12, is a rig. National Investors Co.'s No. 1 Posey, NW cor. SW SE, Section 17-16-8, is being deepened from 3,300 feet. Carpenter and others' No. 2 Thompson, SW cor. NW SW, Section 22-17-11, has been abandoned at 1,810 feet.

Carter County

Paul Turner and others made location for No. 1 J. C. Carter, SW cor. NW, Section 13-1s-3w.

Hughes County

Jarvis & Holm's No. 1 F. Fish, NE cor. NW NE, Section 30-7-8, is a cellar. Bur-Kan Petroleum Co. has the cellar dug for No. 1-A Charty, NW cor. SE SW, Section 29-6-6.

Muskogee County

Mack Drilling Co.'s No. 3 Peterson, NW cor. SE SW NW, Section 34-16-15, is rigging up. Ash Brothers' No. 1 Spaulding, NE cor. NW SE, Section 8-15-18, is an old well rigging up to deepen from 760 feet. Taylor & Geiger's No. 1-A H. Ware, NE cor., Section 18-15-15, is dry and abandoned at 1,339 feet. Bryan Petroleum Co.'s No. 1-A Refinberry, CSL SW NE, Section 13-14-16, made 100,000 feet of gas in sand 570-82 feet.

Oklahoma County

S. M. Stauffer, trustee's No. 1 Jones, SW cor. NW NW NW, Section 2-11n-3w, Oklahoma City Pool, has been completed for 13,550 bbls. in 6½ hours, producing from Wilcox sand topped at 6,240 feet, total depth 6,380 feet. Denver Producing & Refining Co.'s No. 1 King, NE cor. SW NW, Section 3-11-3w, topped Wilcox at 6,355 feet, drilled to a total depth of 6,515 feet and made 12,196 bbls. in 8 hours on 3¼-inch choke. H. F. Wilcox Oil & Gas Co.'s No. 1 Lowe, NW cor. NE NW NW, Section 10-11-3w, has been completed for 5,649 bbls. in 4 hours on a 5¼-inch choke, producing from Wilcox sand topped at 6,385 feet, total depth 6,551 feet. Anderson, Kerr and others' No. 1 Danbold, SE cor. NE SW, Section 15-11-3w, topped Wilcox sand at 6,425 feet, drilled to a total depth of 6,540 feet and gauged 11,528 bbls. in 8 hours. Stauffer and others' No. 1 Weinig, SW cor. NE NW SE, Section 15-11-3w, topped Wilcox at 6,380 feet, drilled to 6,516 feet and made 9,941 bbls. in 8 hours on a 5¾-inch choke. Phillips Petroleum Co. and Shell Petroleum Corp.'s No. 1 Egermier, SW cor., Section 23-11-3w, has been completed for 6,124 bbls. in 6¾ hours on a 7-inch choke, producing from Wilcox sand topped at 6,427 feet, total depth 6,505 feet. Ben Head, Jr.'s No. 1 Community, SE cor. NW SE, Section 34-11-3w, has been abandoned at 5,409 feet.

Okmulgee County

Henley and others' No. 1-A B. Lee, NW cor. SE SW, Section 26-15-12, is drilling at 1,350 feet. Kirkland & Son's No. 7 E. Brown, CSL NW SW, Section 9-15-13, is dry and abandoned at 2,546 feet. A. W. Cline's No. 8 N. Harrison, CEL NE SW, Section 19-15-14, is a dry hole at 1,704 feet.

Payne County

Wood Oil Co.'s No. 1 Curley Chief, SW cor. SE, Section 33-19-5, an old well originally completed at 2,135 feet, had been deepened to 3,792 feet and plugged back to sand 2,857-2,900 feet to test.

Pontotoc County

Stanolind Oil & Gas Co.'s No. 3 Roper, SE cor. NW, Section 32-5-5, is drilling at 100 feet.

Stephens County

George Pace and others' No. 13 McMasters, NW cor. NE, Section 13-2s-8w, is moving in rig material. No. 12 McMasters, NW cor. SW NE NE, Section 13-2s-8w, has been abandoned at 1,499 feet.

Wagoner County

L. Price and others' No. 3 Verner, SW cor. NW, Section 15-17-16, has been abandoned at 832 feet.

MRS. W. C. CAMPBELL DEAD

Mrs. W. C. Campbell, wife of the division superintendent of the Prairie Pipe Line Co. at Eastland, Tex., died on October 14. Funeral services were held in Eastland and the body taken to Findlay, Ohio, for burial.

The Result of Experience

A fire-door frame on a boiler is generally taken for granted but there are reasons why one construction or another is preferable.

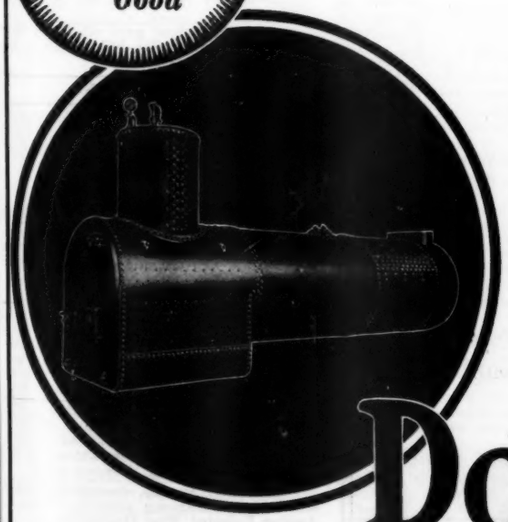
Notice the frame of the Donovan. You will see that the firebox-head flange laps over the front-head flange so that the weld is turned away from the fire.

This design was adopted after much study. It reduces seams to the minimum and places the one necessary seam in a protected position. It is thoroughly reinforced with staybolts.

In addition, it permits the easy placing of the firebox, during the process of manufacture so that all staybolt holes can be lined up properly, avoiding any cross-strains at the start. A deep, down-handed weld is the last step.

This is just one more example of our constant effort to build the best; and to the highest standards.

Donovan Boilers are Consistently Good



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ROCKY MOUNTAIN AREA

(Continued from Page 44)

but no test has ever been drilled to the objective Dakota sands. A number of the leases are reported to have lapsed and the Kistler offer is based on these again being blocked up.

Washington County has been receiving considerable attention from the oil companies recently. The Prairie Oil & Gas Co. has a block of leases in Township 2n-54w, just west of Akron. The Akron Oil & Development Co., which has headquarters at Akron, has a block north of the Prairie leases and a deal is reported pending for drilling a test.

Adams County

The Hills Dome Lease Development's No. 1 Hills, SE cor. Section 27-3s-64, Watkins district, is drilling below 3,735 feet after being down for several weeks due to the death of Nettie M. Slatt. The well was making considerable gas through 3,000 feet of carried water when operations were suspended. This gas is reported to have shown a slight increase since drilling was resumed. The hole is supposed to be bottomed in the Pierre shale.

Arapahoe County

MacDeb Drilling Co.'s No. 1 Fitzsimmons, NE Section 7-4s-66, near Aurora, has not made any new hole the past week and is cleaning out at a total depth of 5,785 feet. A contest between groups of stockholders for control is reported developing in this company and its affiliated organization, the Fitzsimmons Oil & Leasing Co., and this is expected to come to a head at a stockholders meeting on October 27.

Jefferson County

Ruby Hill Oil & Gas Co.'s No. 1 Braden, SE cor. Section 24-4s-69, near Denver, is drilling at 4,050 feet in a hard sandstone.

Lincoln County

Eastern Colorado Oil Co.'s No. 1 State, SE cor. NW Section 36-14-57, near Hugo, is bottomed at 3,425 feet and fishing for bit. It has 120 feet of open hole which is standing up without caving. A hold on the tools was secured, but they could not be jarred loose. A rope knife will be used to cut loose from the fishing string and then long-stroke jars will be run in an effort to loosen them. If this is unsuccessful, the tools will be shot and attempt made to sidetrack them. The hole is believed to be bottomed just a few feet off the Dakota and is making a little wet gas.

Larimer County

The Mayer Oil Co., of which Ed R. Mayer is president, and which is the parent concern of the Johnson Ranch Royalty Co., which operates extensively in the Texas Panhandle, has closed for leases on 7,000 acres on the Berthoud Dome in Larimer County, at the western edge of the town of Berthoud and 20 miles south of the Fort Collins Field. The Berthoud Dome is a well-defined structure which was tested in 1925 by the Midwest Refining Co. The Midwest well had good shows of oil and gas in several horizons, but the company abandoned the well and pulled out. Subsequently the Five Square Oil & Gas Co., a local concern, went in and leased up some acreage and drilled several wells which were small producers. The Raddatz Corp. recently acquired some of the holdings of the Standard Oil Co. of Colorado and additional acreage and drilled in a producer which has not yet been completed. The Raddatz group has 1,000 acres. The Mayer Oil Co. holdings are south, east and north of this group and were acquired after the structure was regeologized.

Three wells on the structure which are producing include the following: No. 1 Hertha, NW cor. Section 21-4n-69, which came in for 350,000 feet of gas and 100 bbls. of oil early in 1931. Gas has increased to 1,039,000 feet and the oil amounts to 60 bbls. per day. Total depth is 3,792 feet. The oil is coming from the Muddy sand and the gas is saved between casings from an upper horizon. No. 1-A State, SW cor. Section 16-4n-69, was completed in 1929 at a total depth of 3,781 feet, and flowed an average of 18 bbls. a day during 1930 through the 6¼-inch pipe. No. 1 Fagin, NE SE NE Section 17-4n-69, did not reach the Muddy, but was completed at 3,273-3,312 feet in the Nio-Benton and is making at present 425,000 feet of gas per day with 460 pounds pressure.

Raddatz Corp.'s No. 1 State, SW cor. NW Section 16-4n-69, only a few feet from the Midwest test, went 5 feet into the Muddy at a total depth of 3,780 feet and began flowing by heads, making around 50 bbls. at each head at two-hour intervals. Since then it has been troubled with cavey ground. It is planned to run a string of 4¾-inch inside the 5⅞-inch, run tubing and try to complete it at this depth. A gauge on the well taken by the Mayer engineers, is reported to show that the well can make around 15,000,000 feet of gas with oil in commercial quantities. The Raddatz Corp. has made a location for its No. 1 Fagin, SE cor. NE Section 17-4n-69, a west offset to its No. 1 State.

The Mayer deal includes No. 1 Reed, SW cor. NW Section 28-4n-69, which was started in 1929 by the Warner-Mosher Drilling Co. and carried to 3,120 feet. It was then filled back to 2,400 feet at which depth the new interests will take it over to complete. Another operation started early this year by P. J. Mosher, Inc., SW SE Section 17-4n-69, and spudded to 85 feet, has steam up to resume under the management of the Maupin interests. Colorado Producers, Inc.'s No. 1 Foster-Motz Reservoir, SW SE SE Section 17-4n-69, is standing at 250 feet. Standard Oil Co. of Colorado's No. 1 Wilson, NW cor. SW Section 21-4n-69, is standing at 1,250 feet.

(Continued on Page 81)

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HUNTING privileges for lease on sixty section ranch located in Chisos Mountains of Brewster Co., Texas. No hunting has been allowed for past two years. Write H. M. Wilson, Marathon, Tex.

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Promise of Better Refined Market

Situation in Chicago Area Shows Signs of Improvement. Proposed Motors Call for Higher Antiknock Specifications

By Robert C. Conine
Chicago Bureau, The Oil and Gas Journal, 6 North Michigan Ave.

CHICAGO, Oct. 26.—It now seems that one may discuss a possible gasoline tank wagon advance without being accused of drawing purely on imagination. In fact, a price increase in these markets, there are good reasons for believing, is seriously considered by important interests as the necessary step toward clearing up the atmosphere as a prodigal industry faces the hard days of winter. In Chicago oil trade circles such an advance is confidently expected in spite of the fact that recent tank wagon market revisions elsewhere have been downward.

It has been indicated that continued strength in the gasoline tank car markets, with evidence that the refiners are not to be stampeded by the opportunity for ready profit, will result shortly in an advance of at least 1 cent in the tank wagon markets in the territory. The fact that the Oklahoma fields have re-entered as a major factor in the crude oil and natural gasoline markets, and the fact that the report on gasoline stocks in the country has shown a somewhat disconcerting increase following this reopening of the fields, indicate that the industry has been taking the worst possible view of the situation as the safest course to follow in gauging the markets. Many of those refiners who saw in every price advance an opportunity to get rid of material are either no longer with us or are aware of the error of their former ways.

Gasoline Tank Car Markets

The gasoline tank car markets continue strong and advancing in price. It is reported that a number of refiners are behind on their deliveries, and the buying policy of the larger companies has practically cleared the district of excess material. In fact, the quantity of gasoline offered on the spot market is surprisingly small, and the only inquiries worth mentioning are those of Mid-Continent refiners seeking material for their own requirements. Another large item in refinery buying is natural gasoline and this has tended to discourage independent blenders who are purely on the retail side.

According to oldtimers here, Chicago has never witnessed such ideal motoring weather this late in the year. For several weeks now there has been one cold, murky day and six bright and warm days out of every seven with the result that the roads, highways and city streets have been literally teeming with automobiles. It might be expected that the peculiar behavior of the weatherman is making life a trial for the marketers dispensing gasoline adjusted to weather conditions, but, so far, no complaints of vapor lock have been registered. Incidentally, it may be pointed out that tests just completed on two "cold weather" grades show a very commendable Reid vapor pressure.

Possible Tank Wagon Price Advance

The stiffened gasoline tank car markets have practically removed spot market buying from the picture in Chicago district. While U. S. Motor gasoline of no octane specifications is quoted on the open market at from 3¾ to 4 cents, the jobbers are obtaining material on their contracts at around 3⅛ cents and less. The jobber has an opportunity to draw his full commitment and turn over the material beyond his requirement to a less fortunately placed jobber at a quarter or half a cent profit. This underselling affects the tank car open markets unfavorably and when the spot market quotations reach a certain low level the contract buyer takes his alternative of buying on the spot market quotation of a certain publication, sometimes as much as three-eighths of a cent below the low.

A 1-cent advance in the tank wagon markets brings the contract price to around 4⅛ cents, and, so it is contended, the open market is given room to move ahead. One thing is certain, however, there must be assurance that the trade has passed the nervous stage. The tank car prices Monday were higher and apparently firm. U. S. Motor of no octane specifications moved up to 3¾ to 4 cents and further advances are expected this week. The 60-62 gravity, 400 endpoint material was quoted Monday at 4 to 4¼ cents. The 64-66 gravity 375 endpoint material advanced a quarter of a cent to 4⅜ and 4½ cents, while the 68-70 gravity 360 endpoint gasoline made a similar advance to a range of 4¾ to 5 cents. The 50-52 gravity 450 endpoint naphtha moved up an eighth of a cent to 3¼ and 3⅜ cents.

Five-Cent Gasoline Tax Proposed

James Simpson, chairman of the Chicago Plan Commission, has suggested to Governor Emmerson of Illinois a plan whereby the state will increase its revenue by $10,000,000 a year. It is all very simple. Just add 2 cents to the present 3-cent gasoline tax levy, and there you are. The state would collect the 5-cent tax and return 2 cents to the county in which it was collected. Mr. Simpson's argument, as quoted from a published interview, is as follows:

"Railroads and other forms of transportation pay taxes into the general fund which are used for many purposes other than those of direct benefit to the transportation interests. The automobile is merely a newer form of transportation facility and I believe it should be taxed along with other forms of transportation for the benefit of the general public."

The 2 cents reverting to the counties would be used for the benefit of corporate and educational interests. Up to Monday, the refiners who have been selling gasoline for less than the present state gasoline tax still had to be approached very cautiously on the subject, especially in view of the fact that the war against gasoline bootlegging is beginning to bring out stirring revelations. In fact, merely one of these revelations was that which came out when Frank V. Martinek, of Standard Oil Co. of Indiana, who is chairman of the Gasoline Tax Evasion Committee, questioned one of the highest officials handling the state's gasoline tax problems and found that this official himself, a retired oil marketer, owes the state "more than $1,000" in gasoline taxes from his former operations.

A newspaper account which quoted former Justice Paul Samuell of the Supreme Court, who is chairman of Governor Emmerson's commission investigating the tax evasion, as saying that the commission has failed to find any evidence of a gasoline bootlegging ring, and has found that "testimony indicates that the state is exercising diligence in the collection of the tax," has been flatly contradicted by Judge Samuell. According to Judge Samuell, no such statement has ever been made by him or any authorized party.

Among the important developments in the district of interest to marketers three may be given special attention: the changing specifications of gasolines marketed in the territory, especially in respect to antiknock value; the proposal of a 5-cent state gasoline tax in Illinois to replace the present 3-cent levy, and the latest bombshell in the war against gasoline bootleggers.

Gasoline Characteristics

Tests have been completed on the gasolines marketed as the regular grade by two major companies in the territory. The samples were picked up in Chicago and the results may be compared to those of samples taken a week earlier from the regular pumps of eight of the larger sellers and given below. Characteristics of gasoline sold by company "A" are as follows: Gravity, 59.3; color, 25; doctor and corrosion, negative; gum by copper dish test, 6 mg.; Reid vapor pressure, 7.7 pounds; octane number, 63; initial, 95°; 20 per cent, 180°; 50 per cent, 260°; 90 per cent, 368°, and endpoint, 401°.

Regular gasoline sold by company "B": Gravity, 60.6°; color, 26; doctor and corrosion, negative; gum by the copper dish test, 3 mg.; Reid vapor pressure, 8.1 pounds; octane number, 63; initial, 102°; 20 per cent, 182°; 50 per cent, 264°; 90 per cent, 357°, and endpoint. 390°.

The next exhibit is that of the gasoline the trackage station operators are bringing in from a Texas refinery to undersell the offerings of the majors. This material has a yellow cast and may be colored and sold by cut-price merchants as an antiknock motor fuel. Characteristics: Gravity, 58.2; octane number, 58 (given as 45 benzol equivalent); initial, 94°; 5 per cent, 140°; 10 per cent, 162°; 20 per cent, 200°; 30 per cent, 234°; 40 per cent, 260°; 50 per cent, 286°; 60 per cent, 310°; 70 per cent, 329°; 80 per cent, 356°; endpoint, 430°; recovery, 97.5 per cent; residue, 1.5 per cent, loss 1 per cent.

The following table gives the characteristics of seven of the larger companies' regular gasoline shortly after Standard Oil Co. of Indiana announced that it would introduce a new gasoline which will be adjusted to weather conditions. It will be noted that the octane ratings are in nearly every case already above the 53 octane number which characterized the regular grade several weeks ago.

	A	B	C	D	E	F	G
Oct. No.	63.5	60.4	58.0	64.2	63.5	65.5	63.5
Gravity	59.7	60.4	58.8	59.3	67.0	61.0	60.7
Initial	84.0	89.0	96.0	86.0	88.0	89.0	88.0
10 per ct.	147	148	157	146	118	138	140
20 per ct.	193	185	193	184	136	172	176
30 per ct.	229	215	221	212	155	208	206
40 per ct.	255	241	245	239	179	239	236
50 per ct.	276	263	268	264	207	264	260
60 per ct.	292	285	289	284	239	284	284
70 per ct.	315	311	314	312	274	310	312
80 per ct.	337	338	339	339	322	332	338
90 per ct.	364	371	367	371	367	356	378
95 per ct.	390	405	388	398	396	377	409
Endpoint	392	411	398	402	414	385	418
Recov.	95.4	96.2	97.6	97.0	98.0	97.2	97.0
Residue	0.9	1.1	1.0	0.8	1.0	1.0	1.2
Loss	3.7	2.7	1.4	2.2	1.0	1.8	1.8
% over. at							
140° F.	8.8	8.4	5.8	8.6	22.0	10.8	10.8
212° F.	24.8	29.0	26.8	30.0	51.6	31.2	32.5
221° F.	27.5	32.2	30.0	33.5	54.8	34.2	36.5
284° F.	54.0	59.5	58.0	60.0	72.0	60.0	60.0
392° F.	94.7	93.6	96.0	94.5	94.5	....	93.0

There were several suprises in the results of these tests and an investigation so inspired revealed that two of the companies with the highest octane number gasoline have recently installed extensive cracking equipment at their refineries in the district. These installations are on no mean scale and represent literally millions of dollars expended in recent days in improving gasoline, especially in respect to antiknock rating and stability both as to vapor tension and pseudo-gum content.

Higher Compression Ratio

While it is not expected that a formal announcement will be made before the automobile show opens in New York City, several oil company executives have interested themselves in reports said to have emanated from the metropolis and which are to the effect that the automobile manufacturers are preparing to spring a great surprise on the oil industry and the public. Putting the two and two gathered from here and there together the omens point to the introduction of an automobile engine, by various manufacturers, which will have a compression ratio of slightly better than 6:1. The trouble, in the main, has been carbon deposits which after the third 500 miles caused knocking with the best gasolines of premium grade. Therefore, the oil company executives are prepared to hear that something has been done in the form of an effective decarbonizer.

Such a development, it is readily seen means that the gasoline of 1932 must be improved in respect to antiknock value either by Ethylizing or by specializing the cracking operations. It is probable that the minimum octane rating for gasoline used in such engines will be in the immediate neighborhood of 74, the current Ethyl standard. The costs incident to the manufacture of this gasoline, excepting those negligible cases where special crudes are processed, will force the retailer to demand a premium price for this motor fuel, although at present refiners in the East are finding it possible to market a 70 octane number gasoline from the regular grade pumps.

Further Antiknock Improvement

One of the larger companies operating in the district has advised the writer that it is introducing a 67 octane number regular grade gasoline by the middle of next week. Another major interest has indicated that it sees the establishment of a 70 octane number gasoline as the regular grade in the territory as a certainty. While the refiners have continued to invest heavily in equipment to provide a better antiknock motor fuel there is evidence that there has been some uneasiness as to a possible move on the part of Ethyl Gasoline Corp. It is pointed out that the Ethyl corporation could easily minimize the importance of cracking operations to obtain higher octane ratings by introducing a second grade of its own, say of 70 octane number. The feeling is strong, however, that Ethyl Gasoline Corp. will be hesitant about making any move which may tend to lower the high standard which the name "Ethyl" sets in the public mind. It is also to be pointed out that many of the refiners are modernizing their plant operations in order to provide an Ethyl stock which will require less tetraethyl lead, and thus save a considerable sum in the production of the premium grade, the marketing of which provides a very nice profit.

Kerosene

The kerosene markets were slightly firmer due to betterment in the distillates list, but the price remained unchanged.

Fuel Oil and Gas Oil

The fuel oil and gas oil markets continue strong and firm in price in spite of the fact that the weather has not been such as to promote buying by consumers. Material is comparatively scarce and many of the marketers have withdrawn entirely from the open market. One refiner operating in Texas is reported to have sold 2,385 cars of 34-36 gravity and 38-40 gravity gas oils, zeros, in the district, but is far behind in making deliveries. This refiner, according to a reliable report, is making six cars of the material daily and is shipping the gas oils to apply on these contracts on a quota basis. This has been pronounced highly unsatisfactory, as a purchaser obtaining his present quota, say of 10 cars a month, would get his full commitment in about a year and a half, and the buyers are not looking for 1932 oil quite yet.

Eastern Price Conditions Are Mixed

While Gasoline Quotation Settled Kerosene and Cylinder Oils Advanced. Eastern Refiners Further Curtail Output

By A. E. Mockler

New York Bureau, The Oil and Gas Journal, Rooms 1919-21, No. 154 Nassau Street

NEW YORK, Oct. 26.—Mixed price trends developed in the East Coast refined products market during the past week, the refinery gasoline quotation settling at an inside of 5½ cents, in line with the half-cent cut initiated by Standard of New Jersey during the previous week, while cylinder oils again advanced and the kerosene market was working into firmer position. East Coast refiners are curtailing their plant operations further, but additional sharp cuts in throughput are indicated as essential if production, demand, and surplus stocks are to be balanced at an economic level. Refiners in this area during the week ended October 17 were running at 72.7 per cent of capacity, with daily runs of 460,900 bbls., as contrasted with daily runs of 467,700 bbls., and operations at 75.2 per cent of rated capacity during the preceding week. Notwithstanding these reductions, however, stocks of both gasoline and gas and fuel oils increased during the week.

While volume of gasoline sales is showing a seasonal contraction in the East, the market thus far has shown an unexpected ability to withstand this development, and from a price standpoint the situation remains quite orderly. With the leading companies showing a willingness to meet any competition which may develop by making open market price cuts to conform to shading of competitors, the outlook for a stable refinery market during the balance of the year is much more favorable than was formerly the case.

Octane number has displaced price as the all-important factor in tank car gasoline sales, and refiners who find themselves unable to meet the specifications for motor fuel of high antiknock rating with their present plant equipment are faced with the alternative of equipping their refineries with new stills or seeing themselves relegated to the position of producers of second-grade gasoline.

Refinery Gasoline

The general market on U. S. Motor in tank car lots has now settled at 5½ cents per gallon, meeting the quotation established late in the preceding week by Standard of New Jersey. The New Jersey company, however, is posting gasoline of higher octane number at 6 cents, the 5½-cent figure applying to motor fuel under 65 octane rating. However, other sellers are selling gasoline testing 65 octane number or better at 5½ cents.

There has been a well-sustained demand for gasoline throughout the week, weather conditions, on the whole, continuing favorable for continued heavy consumption. However, there are evidences of slackening demand in some parts of the territory. Refinery holdings of East Coast refiners as of October 17 totaled 4,045,000 bbls. of gasoline, against 3,949,000 bbls. on October 10, this advance developing despite a substantial cut in refinery runs. It is expected that refiners will reduce their throughput further, with efforts centered on keeping surplus motor fuel stocks at 4,000,000 bbls. or less throughout the winter months.

Continued lack of demand for American gasoline for export is cited as a factor necessitating further readjustments in refinery output of motor fuel during the winter months.

California gasoline has reached principal Atlantic Coast ports in substantial quantities during the past fortnight, and the marketing of the Pacific Coast product has been responsible in some measure for the small increase in refinery stocks here.

Tank Wagon Gasoline

Routine price readjustments at various points in the territory have featured eastern tank wagon markets during the week. Atlantic Refining Co. and other marketers reduced both regular and premium grades of gasoline 1 cent per gallon during the week, in Pennsylvania only, the reductions applying both to tank wagon and service station prices, and covering practically the entire State.

Effective October 22, Socony-Vacuum Corp. advanced tank wagon and service station gasoline prices 1 cent per gallon at Utica and Binghamton, N. Y., bringing these markets in line with prevailing quotations in other parts of the territory.

While week-end football classics in various parts of the East are instrumental in making for heavy week-end sales of gasoline, it is reported that railroad competition is more of a factor now than during recent years. Leading railroads are advertising extensively, featuring the comfort and convenience of rail travel to football centers, and football fans who are wearying of the dense traffic and parking difficulties incidental to motor travel to the principal games are flocking in increasing numbers to the railroads for transportation to the games.

Retail price cutting in the principal market centers of the East has apparently been brought well under control, and cut price situations, which were visible on all sides a few months ago, are now a rarity. The tightening in refinery markets has been an important factor in bringing this about, while local organizations of independent station operators have also been instrumental in eliminating some of the cut-throat tactics formerly employed.

Premium gasolines are coming in for heavier demand, and marketers report that their percentage totals of weekly sales are showing a steady trend toward the higher grade product.

Kerosene

Consumption of kerosene is picking up slowly but steadily, and the weaker holdings which have been depressing the market for the past several months appear to have been worked off. All of the principal sellers are now quoting 41-43 water white in tank car lots at the posted price of 5 cents per gallon, f.o.b. terminals, and while an occasional car might be picked up at 4¾ cents, open market offerings at that level appear to be a thing of the past.

Tank wagon kerosene is taking on more activity, in line with the seasonal increase in consumption, but the East has yet to experience a real cold snap this fall. A number of marketers are now stocking kerosene regularly at some of their gasoline service stations, and sales through this channel are expected to set a new high figure during the coming winter months.

Lubs

Cylinder oil prices are again higher, reflecting recent increases in quotations at the refineries, and the market is in fairly strong position. Spot 635 steam refined is up a half cent at 24 to 24½ cents per gallon, with other grades showing similar advances, as follows: 650 steam refined, 25½ to 26 cents; 600 Pennsylvania flash, 26½ to 27 cents; 630 Pennsylvania flash, 30½ to 31 cents; 600 Warren E, 25½ to 26 cents; 600 Oil City E, 24½ to 25 cents; light bright stocks, 35½ to 36 cents; and dark bright stocks, 34½ to 35 cents per gallon. There has been but a limited spot demand for cylinder oils during the week but considerable export inquiry has developed, and some fair sized shipments are expected to move into export channels over the next few months.

Red and pale oils were again without price change during the week. Volume had shown a little increase, and tank car movement to principal consuming industries was somewhat larger. The textile industry, in particular, has been taking oils in good quantities.

Paraffin Wax

Demand continued confined to small quantities throughout the week, and the market was in quiet position. Prices remained unchanged at the reductions put into effect during the previous week. Export demand for fully refined grades has been disappointing in recent weeks, although some fair sized parcels of crude scale have been closed for shipment abroad.

A consuming industry utilizing paraffin wax has been developed through the growing vogue for "cellar vineyards." Grape juice concentrates, wine bricks, etc., all of which after processing will turn into wine unless rigid precautions are observed (and these precautions are almost universally ignored) call for paraffin lined kegs for storage, and the keg makers this year have used larger quantities of wax than ever before.

Fuel Oil

The 10-cent reduction put into effect during the previous week has brought the market down to the lowest price level in the history of the industry, and has apparently adjusted the market to the changed conditions incidental to Gulf Coast and European competition on bunker fuel oil sales.

The present price of 60 cents per barrel is being maintained on spot sales and contract deliveries, and refiners are hopeful that this low quotation will be of relatively short duration.

Volume of business in fuel oil markets has fallen off a little, in so far as marine sales for bunkering are concerned, but domestic consumption is steadily increasing, and refiners are more optimistic regarding this phase of their operations.

Diesel Oil

Spot Diesel oil, at $1.30 per barrel, is likewise at the lowest level in the history in the East Coast industry, and the market continued in quiet position throughout the week.

Notwithstanding curtailed contract withdrawals in a few instances, volume of marine Diesel oil business thus far in the year compares quite favorably with 1930 totals, due to the fact that a number of new Diesel burning vessels have come into the New York service this year, offsetting in large measure the smaller takings of some of the established lines, which have curtailed their sailings somewhat.

Gas Oil

Hand-to-mouth trading featured the gas oil market throughout the week, with the posted price for 28 plus recycled oil holding unchanged at 4 cents per gallon in tank car lots, f.o.b. refinery terminals. Refinery stocks of gas and fuel oils increased somewhat during the past week, but with refinery operations showing a further decline it is expected that East Coast refiners will shortly begin to draw rather heavily against their stocks of finished oils.

Gas manufacturing companies are drawing stocks on contract in good volume, this business showing more activity as the heating season progresses.

Furnace Oil

While weather conditions throughout the East thus far have not been conducive of sustained consumption of domestic heating oil, there have been a few spurts in demand, and the market is in fairly steady position.

Jobbers are carrying fairly large stocks of furnace oil, and it is expected that the first cold snap will empty this storage and result in considerable replacement buying.

Furnace oil quotations remain unchanged in both the refinery and tank wagon markets.

Export Market

There has been considerable movement in export prices at the Gulf this week, but relatively little business. One contract for 3,000 tons of 64-66 was closed during the week, at an undisclosed c.i.f. Rouen price. Another mixed cargo, of 9,000 tons, made up of Navy, 64-66, water white and prime white, was also closed for November shipment to France, the quotations in this transaction likewise being undisclosed.

Water white kerosene for export has strengthened in the Gulf market, with 41-43 quoted at 3¾ cents per gallon, up a quarter, with 44 prime white unchanged at a range of 3½ to 3¾ cents.

Navy gasoline advanced three-eighths cent to 3⅞ cents during the middle of the week, but at the close was off to 3¾ cents, representing a net advance of a quarter cent per gallon for the week. On the other hand, 64-66 375 endpoint was reported sold down to 4 cents, but at the close of the week was held firm at 4¼ cents, representing a net drop of one-quarter cent for the week and bringing this grade into line with the nominal quotations on 60-62 400 endpoint, and 61-63 390 endpoint.

There was a fairly steady tone in the export market at the close of the week, and it was generally believed that the firmer tendency in Group 3 markets would be reflected by more strength in the export situation at the Gulf.

Some inquiry for Venezuelan and Mexican crude for 1932 shipment continued in evidence during the week, but no actual fixtures were reported, and prices remained unchanged at previous asking levels.

Petroleum Exports

Routine movement of refined products into export channels was reported locally during the week, volume in most instances being smaller than that for the previous week.

The following table shows principal exports of refined petroleum products from the port of New York for the past three weeks (all figures in gallons unless otherwise noted):

	Week ended		
	Oct. 16	Oct. 10	Oct. 3
Gasoline	445,000	356,000	10,000
Naphtha	60,000	480,000	183,000
Kerosene	6,000	95,000	16,000
Fuel oil	65,000	18,000	385,000
Lub oil	500,000	810,000	1,150,000
Pet., ref.	1,080,000	850,000	410,000
	Pounds		
Petrolatum		6,000	48,000
Paraffin wax	490,000	990,000	1,170,000
Refined	615,000	350,000	100,000
Scale	110,000	400,000	110,000
Lub. grease	350,000	650,000	890,000

Unsettled economic conditions in Europe and other foreign countries are contributing to a declining consumption of many refined petroleum products, and this, together with intense Russian and Rumanian competition, is being reflected to the full in export trading locally. Operators here have about abandoned hope for any sustained increase in demand during the balance of the year, and look for continued hand-to-mouth trading in export circles.

Imports

Imports of crude and refined petroleum

Where the best Rope is none too good—

On this monument to American engineering skill, the Empire State Building, New York City, 86 stories—1,250 ft. high—the tallest building in the country, the Ev-Air-Tight Calking Company of Philadelphia used only AMCO "ALL-WEATHER" Best Manila in its work of window calking.

Every open-minded person will admit it is a compliment to have one's rope used on such a hazardous job. If you were working on a swinging scaffold 1,000 ft or more above the ground, wouldn't you feel "easier" if you knew the rope keeping you there was truly rot-resistant,—where the strength was protected against serious damage by dry-rot, etc?

For greater safety and economy use

AMCO ALL-WEATHER ROPE

Made by

St. Louis Cordage Mills

Eleventh and Soulard Sts., St. Louis, Mo.

Branch of

American Manufacturing Company

Noble and West Streets Brooklyn, N. Y.

The GREEN marker yarn on the outside of one strand of the dark brown rope identifies AMCO "ALL-WEATHER" Manila.

at principal United States ports totaled 1,468,000 bbls., a daily average of 209,714 bbls., against 1,842,000 bbls., a daily average of 263,143 bbls., for the previous week and a daily average of 215,250 bbls., for the four weeks ended October 17. Details follow:

(Barrels of 42 gallons)

At Atlantic Coast Ports—	Bbls.
Baltimore	514,000
New York	419,000
Philadelphia	217,000
Others	196,000
Total	1,346,000
Daily average	192,285
At Gulf Coast Ports—	
New Orleans and Baton Rouge	122,000
Total	122,000
Daily average	17,429
At Atlantic and Gulf Coast Ports—	
Total	1,468,000
Daily average	209,714
Daily average four weeks	215,250

Distribution of total imports is as follows:

	Bbls.
Crude	1,014,000
Gasoline	119,000
Fuel oil	335,000

California Oil Receipts

Receipts of California crude and refined petroleum at Atlantic and Gulf Coast ports totaled 551,000 bbls., a daily average of 78,714 bbls., compared with 332,000 bbls., a daily average of 47,428 bbls. for the previous week and a daily average of 57,321 bbls. for the four weeks ended October 17. Details follow:

(Barrels of 42 gallons)

At Atlantic Coast Ports—	Bbls.
Boston	35,000
New York	243,000
Philadelphia	174,000
Others	99,000
Total	551,000
Daily average	78,714
At Gulf Coast Ports—	
All ports	none
At Atlantic and Gulf Coast Ports—	
Total	551,000
Daily average	78,714
Daily average four weeks	57,321

Shipments of California refined products for Atlantic and Gulf ports during the week included the following:

For New York: 96,900 bbls. of gasoline on the Dixie Arrow (Standard Oil Co. of New York).

For Bayonne: 73,000 bbls. of gasoline on the Virginia (The Texas Company).

For Philadelphia: 114,000 bbls. of gasoline on the Northern Sun (Sun Oil Co.).

For Baltimore: 73,100 bbls. of gasoline on the Roanoke (The Texas Company).

For Providence: 77,800 bbls. of gasoline on the Washington.

Charter Market

Another week of inactivity developed in the tanker charter market during the past week, with only one fixture reported in local shipping circles.

Inquiry was at a low ebb, and rates continued close to record lows.

The week's fixture was as follows:

Steamer Frontenac (Norwegian) 4,397 net, crude, Aruba to Teneriffe, 6/-, November loading.

KANSAS FIELDS

(Continued from Page 36)

for No. 1 Minear, NW cor. NE NE, Section 21-19-1w, Ritz-Canton area. Mid-Kansas Oil & Gas Co. has staked location for No. 2 Whitwright, C SW SW, Section 30-19-1w. Vernon Oil & Gas Co. and others' No. 1 Thomas, NE cor. SW, Section 26-19-2w, is a cellar. P. J. Breslin and others' No. 1 Flook, NE cor. NW, Section 35-19-2w, is moving in. Slick, Pryor & Lockhart's No. 2 Gratton, SW cor. NW, Section 34-20-3w, an old well completed at 3,376 feet, has been plugged back to 3,366 feet and shot in sands 3,354-64 feet and 3,314-19 feet, now testing. Rosenthal & Beardmore's No. 2 Ritz, SW cor. SE SW, Section 19-19-1w, has been completed for 1,211 bbls. on the pump, producing from the Viola lime 3,418-34 feet. Carey and The Texas Company's No. 1 Holt, C NW SE, Section 13-19-2w, has been deepened from 2,946 feet to 2,953 feet and made 35 bbls. Slick, Pryor & Lockhart's No. 1 Stucky, SE cor. SW SW, Section 27-20-3w, has been completed for 9,400,000 feet of gas at 3,141 feet after deepening from 3,012 feet, an increase of 2,000,000 feet of gas. No. 1 Gratton, NE cor. NW NW, Section 34-20-3w, originally completed at 3,115 feet, has been deepened to 3,156 feet and now pumping 25 bbls.

Rice County

Ralph Wixon and others' No. 1 Kelly, SW cor. NW, Section 22-20-10w, which was originally completed at 2,593 feet, is preparing to drill deeper.

Sedgwick County

Continental Oil Co. is erecting the rig for No. 1 Susie Black, SW cor., Section 9-25-1. Location has been made for No. 1 Casey, SW cor. NW, Section 15-25-1.

CALIFORNIA FIELDS

(Continued from Page 47)

marsh gas similar to that being developed in the Dudley Ridge area where several gas wells were drilled a year or so ago. The Milham Exploration Co. gave its No. 1 Crites, a deep well in the Buttonwillow gas field of Kern County, a production test a few days ago, but this project came in wet and the company has accordingly decided to cement off the gray sand encountered at 3,527 feet and plug back in order to exclude this water.

The Standard Oil Co. completed a new well in the Inglewood Field of Los Angeles Basin, but this new producer, No. 67 on Los Angeles Investment Lease No. 1, was good for only 149 bbls. of 19.2 gravity oil per day on the beam from 1,957 feet. The Continental Oil Co. is conducting a pumping test on No. 23 Selover, a new well in the Seal Beach Field, but the production of this well is somewhat of a disappointment as it is good for only 70 bbls. of clean 26.9 gravity oil per day from 6,300 feet. The inability of the Marland to develop substantial production in the deep zone at Seal Beach may prove a stumbling block to the proposal to initiate unit development in this field. This unification of drilling and production activities may still become a reality, although it is thought thot further work along this line will be deferred at least for the present.

REPORT ON OPERATIONS IN COLOMBIA AND PERU

CHATHAM, Ontario, Oct. 24.—International Petroleum Co. of Toronto has issued a report on recent operations in its South American fields.

In Peru, three wells were completed in August with average initial production of 246 bbls. The total crude production in August was 588,463 bbls., while the average daily production in September was 19,573 bbls.

For the eight months ending August 31, there were 34 wells completed in Peru with average initial production of 261 bbls.; while total production from Peru for the eight months was 5,143,418 bbls.

In Colombia, five wells were completed in August with average initial production of 712 bbls. The total crude production for the month was 1,512,528 bbls., while average daily production for September was 47,165 bbls.

For the eight months ending August 31 there were 34 completions in Colombia averaging 654 bbls. initial production; and the aggregate production for that period was 12,383,109 bbls.

BENJAMIN ROBINSON DEAD

CLARKSBURG, W. Va., Oct. 24.—Benjamin F. Robinson, retired oil and gas producer, died at his home in this city this week, following a long illness. He was 71 years of age. Mr. Robinson was a former president and general manager of the Clarksburg Light & Heat Co., now a part of the Hope Natural Gas Co.

ROCKY MOUNTAIN AREA

(Continued from Page 77)

Consolidated Drilling Co.'s No. 1 Maxwell, SE NE NE Section 25-8n-70, Bellvue district, lost the hole at 400 feet, skidded 20 feet to the south and is drilling at 200 feet in No. 1-A. This formerly was the Erbe Oil Co. operation and was taken over by the new company last August. Lou G. Gebhard is an officer of the new company.

Stanley M. Barrows' No. 1 Munroe, C NW NE Section 26-11n-69, Round Butte, is expected to resume shortly at 1,050 feet.

Boulder County

Independent Oil & Refining Co.'s No. 1 Blair-Winter, NW NW Section 25-3n-71, Lyons district, is bottomed at 185 feet in hard quartz and has a show of gas in the bailer that causes the water to bubble over. The formation is so hard that bits have to be changed twice per hour.

C. T. Ahlstrand's No. 1 Woodley, SE NE NW Section 8-3n-70, is bottomed at 485 feet and preparing to set pipe.

The Consolidated Drilling Co. is mapping out a program to drill to the north, south and east of the Woodley well.

Montrose County

Uncompahgre Oil & Gas Co.'s No. 2 Vandemark, SW cor. Section 27-50n-10w, Olathe district, is shut down at 1,021 feet to finance.

Rio Blanco County

Magnolia Petroleum Co.'s No. 1 Maddock, C NW SE Section 9-2s-96, Piceance Creek, cemented 13⅜-inch at 1,532 feet and is waiting. The California Co.'s No. 1 California-Raven, NW SE Section 30-2n-102. Rangely Dome, is drilling below 2,761 feet and close to the top of the Dakota.

El Paso County

Utemoor Syndicate's No. 2 Carson, NW NE NE Section 10-16s-66, Fountain district, has been taken over by Gulf States Oil Corp. The hole is bottomed at 1,025 feet. No. 1 Carson was drilled to 1,900 feet where the hole was lost. At 1,252 feet it had a flow of gas that burned to the top of the mast. No. 1 was drilled a few hundred feet south of No. 2. The block acquired by the Gulf States company includes 12,500 acres. The Utemoor Syndicate retains an acreage interest.

NEW MEXICO

Lea County

The proration committee for the Hobbs Pool placed the potential production at 1,142,240 bbls. daily, as of October 16, from 144 wells on 126 units of 40 acres each, which compares with a potential of 1,176,234 bbls. daily from the same number of wells on 128 units in the schedule which has been in effect the past two months. The reduction in potential was due to special allowances on account of water in two wells and one well being off production, the three wells being on the southwestern side of the pool. These wells are Continental Oil Co.'s No. 1-C State, C NW SE Section 5-19-38, which was given a potential of 25,375 bbls. in the schedule for the first half of September; Landreth Production Co.'s No. 1-C State, NE cor. NW Section 6-19-38, which formerly had a potential of 389 bbls.; and Midwest Refining Co.'s No. 11 State, C NE SW Section 5-19-38, which is not on production. Last month the Midwest well was reported making 80 per cent water, and the other two also were showing water. The allowable outlet for the field for the last half of October was placed at 37,077 bbls. daily, practically the same as has been in effect for some time.

One new location in the Hobbs Pool was announced in Continental Oil Co.'s No. 5-A State, C NW SE Section 33-18-38, an offset to its No. 4 State. The Continental's No. 4-B State, NE NW SE Section 33-18-38, is drilling at 2,760 feet.

Midwest Refining Co.'s No. 26 State, NW SE SE Section 33-18-38, is drilling at 1,305 feet in sandy lime.

Gypsy Oil Co.'s No. 1 East Grimes, NW NE SE Section 33-18-38, is drilling at 3,275 feet in anhydrite. It topped the brown lime at 2,780 feet and had the first gas at 2,790 feet and the first oil at 3,150 feet. There were increases in the oil at 3,250-60 and 3,270-80 feet.

Pacific Coast Oil Co.'s No. 1 Blakey, C SW NW Section 28-19-38, to the southwest of the pool, is drilling water well and moving in materials.

Culberson & Conrad's No. 1 State, C NE Section 22-18-34, Caprock Area, is bottomed at 5,005 feet in lime and is shut down, contract depth having been reached. It had a show of oil at 4,985-90 feet. It probably will be drilled deeper.

Eddy County

Flynn, Welch & Yates' No. 61 State, SE NE NW Section 32-18-28 (corrected) Artesia area, is drilling at 500 feet. Western Drilling Co.'s No. 1 Arba Green, NE NE NW Section 29-17-29, is rigging up. The last named also is a corrected location.

Chaves County

R. T. Neal, and others, SW NW NW Section 21-14-25, Hagerman district, is suspended indefinitely at a total depth of 2,320 feet in lime and shale.

Guadalupe County

New Mexico Producing & Refining Co., Ltd.'s No. 1 McMillan, SW cor. Section 24-5n-16, Mesa Leon area, is bottomed at 2,570 feet in sandy lime and underreaming the 12½-inch from 1,847 feet.

Rio Arriba County

Goverardo Dome Oil Co.'s No. 1, SE Section 15-29-7w, is drilling at 1,762 feet.

San Juan County

Reserve Oil Co.'s No. 3, NW SE SE Section 36-22-14w, Stoney Butte Dome, was plugged back from 819 feet to 816 feet to shut off water and was completed. It is estimated good for 25 bbls.

Kutz Canon Oil & Gas Co.'s No. 1 Day, SW cor. Section 20-28-10, Kutz Canon district, is shut down at 3,635 feet for 5⅛-inch pipe to shut off water encountered at 3,620 feet.

R. C. Oswell's No. 2, NW NW Section 34-30-11w, near Aztec, is drilling at 1,085 feet. It had 550,000 feet of gas per day with 200 pounds pressure, at 985-990 feet.

Continental Oil Co.'s No. 24, SW NW SW Section 1-29-19, Rattlesnake Dome, is bottomed at 5,922 feet in gray sandy lime and is repairing boiler and putting on a new drilling line.

UTAH

A new operation is reported to have spudded in the American Oil Corp.'s No. 1, on the Last Chance Dome in Emery County, in the southern part of the state. The company built 25 miles of new road from the town of Emery to location to haul in material. The structure is in the southwestern corner of Emery County, the southeastern corner of Sevier County and partly in Wayne County. The company has 30,800 acres in the block, mostly held under 19 government permits. The company was formed by Los Angeles people and includes John W. Weightman, Claude E. Bowers, E. V. Falgren, and Russell Havenstripe. The surface is upper Jurassic and the objective is the Pennsylvanian which can be tested at 5,800 feet. The structure has a closure of approximately 700 feet.

Utah Southern Oil Co.'s No. 1 Balsey, C NE NE Section 31-23-21, Grand County, is bottomed in salt at 4,070 feet and is shut down for engine repairs.

Diamond Oil Co.'s No. 1, SE NW Section 16-8s-5e, Utah County, is running casing at a total depth of 3,410 feet to shut off water.

WYOMING

Natrona County

Efforts extending over a period of weeks to test the oil showing in the Muddy sand in the Midwest Refining Co.'s No. 11 Middy, C NE NE Section 23-35-79, Midway Dome, have been unsuccessful, and it is planned to drill another well to explore that horizon. The Muddy was found at 5,967-83 feet and showed considerable oil and gas in the upper part. This was mudded off at the time and the hole carried on down to 6,685 feet to test all horizons down to the Sundance. It then plugged back, but water continued to break in and the hole to bridge. After repeated failures, the rotary bit was installed and the hole redrilled to the Dakota and cemented back to the Muddy. This was done several times with a repetition of the trouble. Finally, it was decided useless to try

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further in that hole and it has been plugged back to the bottom of the second Wall Creek at 5,157-87 feet to make a test of that horizon. When originally drilled through, the second Wall Creek showed some gas in the top of the sand followed by oil. While no satisfactory test was made of the Muddy sand, it showed sufficient oil and gas pressure to indicate it will be commercial.

Summitt Oil Co.'s No. 1 Trewitt, NW cor. Section 21-33-80, North Platte, has finished underreaming to bottom at 1,400 feet and is lowering casing for a water shutoff.

Wyoming Imperial Oil Co.'s No. 1 Quintet Oil, NW SE Section 13-33-79, Country Club district, near Casper, is rigged and ready to spud.

Park County

Midwest Refining Co.'s No. 24 Rosenberg, NE SE NE Section 26-58-98, Frannie Dome, is bottomed in sand in the Embar at 2,990 feet with considerable oil in the hole. Top of the Embar was at 2,902 feet. No test has yet been made pending a decision as to whether the hole will be drilled deeper. The well extends the productive area nearly a half mile to the west.

Washakie County

The Ohio Oil Co.'s No. 1 Strothers, SW SE NW Section 19-45-92, Neiber Dome, is bottomed at 8,000 feet with the first Dakota sand as the next objective.

Fremont County

Kinney-Coastal Oil Co.'s No. 1 Chatterton-Weeks, C SW NE Section 22-3n-1w, Pilot Butte Field, has been completed as a small gas well in the Muddy sand at 3,565-3,631 feet. A portion of this formation was sandy shale and was very hard and tight. It will make between 3,000,000 and 5,000,000 feet per day, according to estimates. Some oil showed below the gas. This well is 250 feet down structure from the company's No. 1 Dykeman, the big gasser brought in two years ago, and it indicates a productive area for the gas sand of between 1,600 and 2,000 acres.

Lander Corp.'s No. 2, NW cor. NE Section 35-33-99, Bartram Gap, is reported preparing to deepen from 1,850 feet to 2,000 feet. It is 300 feet southeast of No. 1 which was abandoned at 1,550 feet in the Embar.

Ward Oil & Gas Co.'s No. 1, NE cor. Section 28-34-90, Dutton Basin, is shut down temporarily at 2,500 feet. It has been fighting cavey ground. It had uncommercial shows of oil and gas in the second Frontier.

Carbon County

Prairie Oil & Gas Co.'s No. 1, SE SE SW Section 29-27-89, Bunker Hill, is drilling at 5,725 feet in blue shale. It cored through the Frontier sands, all of which showed saturation.

Producers & Refiners Corp.'s No. 4 Wertz Dome, SW cor. SE Section 7-26-89, is drilling at 3,425 feet in black sand.

Midwest Refining Co.'s No. 27 Union Pacific, NW SE SE Section 11-20-81, Elk Mountain, is bottomed at 4,020 feet and cleaning out and underreaming.

Converse County

The Wyoming Land Board has granted a temporary permit to the Continental Oil Co. to operate four wells on the Elkhorn Oil Co.'s lease in Section 5-33-76, Big Muddy Field, until January 1, 1932. The wells were shut down September 1 upon expiration of lease. This lease was held by the Elkhorn Oil Co. and subleased to the Midwest Refining Co. Subsequently it was taken over by the Continental company under an operating agreement.

The Three C's Oil Co. is drilling at 200 feet in a shallow well in the old Brenning Basin Field west of Douglas, with production expected at 350 feet. The company is producing five wells in the field which have a total output of 4 bbls. per day. The oil is trucked to a small skimming plant in the Big Muddy Field.

Otto Olston and others' No. 1 Carey, Section 6-32-74, is reported shut down at 570 feet to finance.

Sheridan County

R. & D. Oil Co.'s No. 1 Mock, NW cor. SE Section 21-57-87, is drilling at 1,120 feet and is reported to have had one or two small shows of gas.

Weston County

A new operation in the Osage Field is A. N. Paysano's No. 1 Bock, NE cor. NW Section 6-46-63, which is spudding.

Egaso Operating Co.'s No. 15, SE cor. NE Section 17-46-63, is fishing below 300 feet.

Sandell and others' No. 1, SE SW SE Section 12-46-64, is drilling at 1,200 feet. and the Federal Oil Co.'s No. 1, NE SE Section 15-46-64, is waiting for cement to set.

Julius Peters and others' No. 1 Witzell, SE cor. NW Section 30-46-64, Fiddler Creek, is drilling at 2,530 feet.

MONTANA

Glacier County

Three completions were reported in the Cut Bank Gas Field, all drilled by L. B. O'Neil as agent for the Montana Power Co. No. 1 Whetstone, C SE NW Section 10-35-5w, found the sand at 2,715-37 feet and gauged 9,860,000 feet in 24 hours. No. 1 Peterson, C Section 21-35-5w, gauged 8,000,000 feet at a total depth of 2,746 feet. It extends the producing area 2½ miles to the south. No. 1 Teterug, CSL SW Section 26-36-5w, found the sand at 2,741-2,818 feet and gauged 11,100,000 feet. It extends the field half a mile to the northeast. O'Neil drilling wells are as follows: No. 1 McNeil, C NE Section 23-35-5w, drilling at 1,400 feet. No. 1 Cummings, C SW Section 22-36-5w, drilling at 2,500 feet and showing 1,000,000 feet per day in the base of the Colorado. This well is a mile north of the nearest producer.

R. C. Tarrant's No. 1 Hogland, NW cor. SW Section 13-34-6w, cemented 10-inch at 616 feet.

The Fulton Petroleum Co.'s No. 1 Blackfeet, SW NE NE Section 28-36-12w, Milk River district, is drilling at 2,700 feet.

Carbon County

The Ohio Oil Co.'s No. 1 Chapman, C SW SW Section 2-7s-21, Dry Creek, is drilling at 4,857 feet and is headed for the Dakota. Same company's No. 2 Montana Industrial, C NW NE Section 11-7-21, has rig up, and No. 2 Souders, C NE SW Section 2-7-21, has cellar completed.

Carbon Oil & Gas Co.'s No. 1 Armstrong. SW cor. NW Section 7-7s-22, is bottomed at 4,982 feet and fishing for bit.

Cascade County

Charles Merz and others' No. 1 Sheffelt, SE cor. SW Section 4-21-4e, Black Horse Lake, has rig up, and Buscher & Cassidy's No. 1 Johnson, NE cor. SE Section 19-22-3e, Benton Lake, is fishing for tools at 1,010 feet.

Toole County

Askalta Oil Co., Ltd.'s No. 2 Farbo, SW SE NE Section 2-37-4w, Border Field, is drilling at 1,700 feet. and Oregon Oil Syndicate's No. 1 Barthelote, SW NE SE Section 20-36-2e, Barthelote district, is drilling at 1,450 feet. It had a good show of gas at 1,295 feet.

Liberty County

Liberty Gas Co.'s No. 1 Corwin, C SW SW Section 12-36-5e, Bear's Den, is drilling at 2,100 feet in the top of the Madison lime and has had a few unimportant gas shows. People's Oil & Gas Co.'s No. 1 First National Bank, C SE NW Section 17-36-6e, is drilling at 1,450 feet after straightening up a crooked hole. G. G. Howard's No. 2 Schoonover, C SE NE Section 13-36-5e, is shut down at 1,400 feet.

Rosebud County

Prairie Oil & Gas Co.'s No. 1-XX. Contract 3, NE SW NW Section 26-10n-39, Porcupine Dome, is drilling at 4,080 feet in dark lime.

IDAHO

R. J. Berry and others' No. 1 Kramlich, Section 5-9n-4w, Crystal Dome, Fayette County (Ohio Oil Co.), is drilling at 1,625 feet with rotary. This test is on a block of 7,200 acres recently taken over under an operating agreement with the Mountain States Oil & Gas Co. and is near a well that had a good show of gas before the hole was lost.

SOUTH DAKOTA

The Gypsy Oil Co.'s No. 1 Hunter, C NE SW Section 28-3n-16, Wall Structure, Pennington County, is drilling at 4,905 feet in brown lime. Chadron-Osage Oil Co.'s No. 1, NE cor. SW Section 6-12s-6e, Moody Dome, Fall River County, is drilling below 400 feet. D. J. Carter and others' No. 2, NW NW Section 34-20-1e, Harding County, is reported spudding.

Pipe Line Runs

Average daily pipe line runs for the week ending October 24:

	Bbls.
WYOMING	
Salt Creek	22,740
Big Muddy	1,760
Cody	10
Dallas-Derby	920
Dutton Creek	80
Elk Basin	620
Ferris	30
Frannie	270
Grass Creek	2,080
Hamilton Dome	890
Hudson	250
LaBarge	1,130
Lance Creek	250
Lost Soldier	4,270
Oregon Basin	780
Osage	1,180
Pilot Butte	40
Rock River	1,820
Poison Spider	80
Simpson Ridge	0
Teapot	20
Total Wyoming	39,220
MONTANA	
Buckley-Border	560
Cat Creek	910
Dry Creek	280
Kevin Sunburst	4,660
Lake Basin	70
Pondera	1,270
Total Montana	7,750
COLORADO	
Florence	340
Fort Collins	980
Iles	990
Moffat	850
Orchard	980
Rangely	20
Tow Creek	310
Total Colorado	4,470
NEW MEXICO	
Rattlesnake	767
Hogback	480
Table Mesa	79
Artesia	500
Cap Rock	900
Hobbs	37,077
Jal	1,095
Lea City	1,860
Eunice	485
Total New Mexico	43,243
Total Rocky Mountain area	94,683
Total previous week	92,759
Difference	1,924

GASOLINE TAX EVASION RACKET IS EXPOSED

(Continued from Page 18)

their part in its history. Blackmailing, bribery, and other criminal acts have been resorted to by the participants. One of the chief evaders, who is being styled as the brains of the gasoline bootlegging racket, was beginning to ease other bootleggers out of the picture so as to get control. One gang was spying on another, and all were rapidly developing a system of protection against interference by public officials. They were beginning to line up legitimate distributors by force and intimidation and to get such distributors to turn over all but 1 cent of the tax money to them in return for protection against any collection of the tax. In one instance a bootlegger brought hundreds of cars of gasoline from the Mid-Continent Field to Chicago, diverted them to Michigan and Indiana, sold them, collected the tax, and never paid the State. He was able to market this gasoline readily enough because he reduced his prices by part of the gasoline tax he did not pay, thus giving some benefit to distributors in order to obtain their gallonage. Some of the evaders operated by setting up dummy companies and by the time the State could get around to inspect them and collect tax these companies were out of business and their backers were doing business elsewhere under the names of other dummy companies. One evader, when caught, gave the State a worthless check for $12,000, and the officials have never seen him since. Another group claimed they had turned the tax money over to their attorney. The attorney was indicted but never came to trial.

Evasion of the gasoline tax was only one of the methods resorted to by these bootleggers. In addition they were mixing naphthas, kerosenes, distillates, blending with natural gasoline to make up a motor fuel having the appearance of gasoline on which they could collect the tax without having to pay it to the State. Another large bootlegging ring was blending one car of kerosene and one car of gasoline and selling this mixture as motor fuel, collecting tax on the full amount and paying the state tax only on the gasoline used. Recently we have learned that they are even manufacturing lithographed cans bearing the colors and trademarks of some of the leading marketers of the country and filling these cans with inferior motor oils which are sold to the public as the well-known brands and at the prices for those brands.

Loss Above a Million

It has been reported that the losses of tax money in Illinois have totaled probably more than $1,000,000 in the past year. The auditor of the State admits losses of more than $600,000. Now that is a serious matter for the State. It deprives the State of revenue. It deprives the motoring public of roads which that revenue would build. And it deprives workmen of the work which the building of roads would provide at this time when employment is so badly needed. But in our investigation we were looking at things from the side of the industry and we found the effect of gasoline tax evasion on the marketing situation in the industry to be disastrous indeed. It seems very certain from our investigation that the so-called price situations in Chicago in the past year have had their basic causes in cuts made by tax evaders to get gallonage. Remember they had a 3-cent margin that legitimate marketers did not have. They could cut their prices by the whole amount of that margin and still make as big a profit as the legitimate marketers. They could cut by the amount of the tax and a little more and build up a large gallonage still profitable to them where the legitimate marketers would be selling at an absolute loss. If this process had gone on the legitimate marketers would all eventually have landed in bankruptcy and the bootleggers would have had the business, but as the result of the exposure of gasoline tax evasion, as the result of the work our committee did in uncovering evasion and spurring officials to greater activity, as the result of the vigorous efforts recently made by the State's attorney to push the prosecution of evaders, as the result of the greater activity by state officials in checking up gasoline shipments and payment of the tax, as the result also of the new law in Illinois requiring distributors to register and put up a large bond guaranteeing payment of gasoline tax—as the result of all these acts and courageous measures, it is my opinion that bootlegging, and gasoline tax evasion, has been arrested, at least temporarily, in Chicago. We may never completely eradicate it, but we have only started on the determined efforts we are going to make to keep it down.

Evasion Prevalent Elsewhere

Now what has been happening in Chicago has been happening in many other places. In Pennsylvania the bootleggers were running cargoes of gasoline across the Delaware River and distributing them in Pennsylvania. They were not checked up in Pennsylvania because their places of business were in other states and in those other states they were getting exemptions because their product was not being distributed there. I heard recently of an instance in which evaders were running cargoes of gasoline from the State of Washington into the northern part of Idaho by truck to gain advantage of the high tax in Idaho. They were even collecting a little additional revenue by loading their trucks up with fruits and vegetables from the producing regions in northern Idaho and hauling them back to the markets in cities in Washington. I cannot go into all the details, but there are reports of gasoline tax evasion in practically all the states in the union. There is not the slightest doubt that you have plenty of it here in Kansas City and in other urban areas in this part of the country, and that gasoline tax evasion is hurting nobody as much as it is hurting the men who are sitting in this room.

Methods of Evasion

When we come to analyze the methods of the gasoline tax evaders we find that

there are at least 10 outstanding practices to which they resort. To clear up our understanding of tax evasion and make very definite what we are describing by that term, I am going to read you the list of these practices:

1. Gasoline tax evaders transport gasoline across state lines, and on being questioned as to the disposition of gasoline billed to them produce receipts showing distribution to the adjoining State. Lack of a check-up between states makes this practice possible.

2. They set up paint factories or other industrial plants in order to show records of gasoline sold for tax free purposes when it is actually sold to the trade, and tax is collected.

3. They fail to report gasoline received, or make false reports to the state authorities as to the actual quantity received.

4. They operate under the names of dummy companies which receive and market motor fuel without reporting it for tax purposes. As investigation seems imminent these companies go out of business, but the actual business is carried on continuously by transferring it to new dummies.

5. Where there is no tax or natural gasoline, naphtha, kerosene, and furnace oil, they purchase these products, blend them into a product which they sell to the public as motor fuel, and pocket the tax they collect from the public. Instances have been discovered in which such a product, colored with dye to the proper red has been sold as high-test, antiknock fuel.

6. They raise the gallonage figures shown on affidavits secured in connection with the tax-exempt sales, and pocket the tax on the difference between the amount actually sold to farmers and the amount reported sold in affidavits furnished to the authorities.

7. They juggle shipments and reports; for example, by diverting a shipment billed to them to some other company, usually a very evanescent concern, which is no longer in existence by the time tax authorities begin to hunt it in checking up on the shipment.

8. They corrupt public officials by bribes or by taking them into secret partnerships, induce them to sample improperly or deliberately to falsify their reports, and secure their protection against prosecution.

9. They conspire with railroad employes and others to report shipments improperly.

10. They conspire with unscrupulous refiners to receive shipments which have been improperly or incorrectly reported to the authorities.

Necessity for United Action

These are not words, but facts. The menace affects not one marketer alone, not one company alone, but every one of us. Gasoline tax evasion must be stopped. It cannot be tolerated. If it is not stopped, all the work that you are doing under the code of ethics will be in vain. If it is not stopped, all the efforts we may make to conduct legitimate marketing on sound policies and practices will be useless. We are competitors and we many times disagree on principles and policies and practices, but we are confronted here by a common enemy and we must stand together and defend our business or we will lose it to racketeers.

What can we do? I have given you some idea of what we have already done in Illinois. We are not going to stop there with our efforts to control the local situation. The Gasoline Tax Evasion Committee of Illinois, of which I am chairman, is prepared to present to the American Petroleum Institute at its annual meeting in Chicago in November a great mass of fact information which it has gathered and which is now being used as evidence in the prosecution of many of the influential gasoline tax evaders whose cases are coming to trial in the courts of Cook County. We are making every effort to send racketeers to prison. We want to set examples as to how legitimate business will protect itself and will protect its high ideals and standards against the malefactors in its ranks. And when we get through with that we are going to turn over our information and our experience to the American Petroleum Institute so that our experience can be used in directing the campaign against evasion elsewhere. It will be up to the institute to form a national organization to turn the spotlight of publicity on evasion and to co-operate with local organizations in uncovering evasion, in stopping it, and in punishing offenders. We must not wait for the institute and we must not leave the job to the institute alone. We, as marketers, must join hands and battle against evaders by every possible means.

Measures for Warfare on Evasion

To give you a concrete idea of what we should all do I am going to read here a list of the measures I consider feasible in this campaign or warfare against gasoline bootlegging or tax evasion. These measures are the following:

1. First, all legitimate marketers must be aroused to stand together in a solid front against evaders.

2. State committees should be organized along lines indicated by the Illinois Gasoline Tax Evasion Committee, which has demonstrated by practical experience what can be done to curb evasion. These committees should have investigative units to assist in gathering fact information as to evasion.

3. Public administrators must be apprised of the industry's sincere desire to correct this evil and be made to realize that the State is being defrauded of its revenue.

4. Each state committee must study its motor fuel tax law and see whether it is sufficiently strong.

5. The department charged with the responsibility of collecting the tax must be freed of political influence and must be operated on a business basis with adequate and competent personnel.

6. The railroads must be aroused as to the importance of checking on all shipments in order to prevent evasion.

7. Publicity is one of the most important requirements, as public opinion is molded by the press. It is therefore necessary that our story be carried to the people by the press.

8. Every shipper of gasoline must be required to report shipments to the state tax authorities. This means co-operation on the part of refiners, brokers and distributors.

9. A complete and current check of shipments against tax receipts must be carried out.

10. All distributors must be required to obtain licenses and post bonds guaranteeing faithful and honest reports of gasoline handled.

11. Marking of gasoline trucks to show clearly their owners or operators and source of their load must be required by law.

12. Activities by state authorities must be supplemented by investigational work by the industry's own agents.

13. The industry and various civic bodies interested in law enforcement must keep on the lookout for evidence of collusion between evaders and dishonest officials and must constantly stimulate vigorous action by the authorities in collecting the tax and prosecuting offenders.

14. Finally, each state must have a provision in the law that any offender shall be deprived of his license, his bond shall be revoked, he shall be prosecuted under the law, and also his property shall be padlocked or even confiscated by the State to cover taxes not paid.

Suggestions for Immediate Action

The measures I have suggested can be carried out only by effective work by state committees and by public officials. Your sitting here today and listening to me and talking evasion over among yourselves will of itself accomplish nothing. I am, therefore, going to suggest that this four-state convention proceed to organize a committee for each State similar to the committees that have been organized in Illinois, Indiana and Michigan. If this is done it will be a privilege and a pleasure for the gas tax evasion committee of Illinois to do for each of your committees what it has done for the Indiana and Michigan committees, namely, co-operate by turning over full details regarding its plans and methods of operation.

And just one suggestion as to what you as individuals can do to curb the menace. Every jobber who is operating legitimately and paying his gas tax to the State, should make certain that the refiners selling to him are not also selling to bootleggers who are evading the tax, cutting prices, and demoralizing his business and the business of every other legitimate jobber-competitor.

In conclusion, I want to emphasize that if we are to have any success in controlling or preventing evasion by the methods I have outlined, we of the industry will have to take the initiative and carry through the necessary action. Owing to politics, to changes of administration, and to lack of familiarity with the nature or seriousness of the evil involved, it is not likely that public officials will show on their own account the necessary degree of interest and aggressiveness. We of the industry must stimulate them to activity, and we must follow their activities closely to see that they are carried through to the success we demand in the campaign against gasoline tax evasion. In other words, we of the industry must provide the real motive force for the campaign.

Finally, I want to impress upon you gentlemen the fact that I am not here to ask you to help the Standard Oil Co. or any group of companies to fight gasoline tax evasion. I am here simply to aid you in comprehending what gasoline tax evasion is and what can be done about it. The menace of evasion threatens every legitimate marketer. It threatens the weak more seriously than it threatens the strong. In calling upon you to take up the battle against evasion I am calling on you merely to defend your own interests. As legitimate marketers we stand for honesty in collecting the tax and passing it on to the State. We stand for integrity in our dealings with the public. Those ideals will be a weakness unless we stand at the same time for ruthless eradication from our business of all practices which conflict with them. We have no other task in connection with the marketing of petroleum products so pressing, so important, so vital even to the very existence of our business as that of combating gasoline tax evasion. If we all stand together as a unit, gasoline tax evaders can soon be crushed.

COLOMBIA INSPECTOR MAKES OIL REPORT

(Continued from Page 25)

Barco concession and the Catatumbo contract.

The Lobitos Oilfields, Ltd., according to "Who's Who," expended $1,000,000, and has "no definite plans for the future," having transferred lands and equipment in the municapility of Puerto Wilches to the South American Gulf Oil Co.

The Union Colombiano de Petroleos is credited with expenditures of $3,000,000 up to August, 1930.

The Richmond Petroleum Co. is said to have expended $5,000,000, this being the only company outside of the Tropical Oil Co. exploring with a drilling rig.

The Societe Europeena des Petroles is credited with paid in capital less than 13,500,000 francs.

Tropical Oil

The Tropical Oil Co., according to "Who's Who," has expended since August, 1930, in Colombia $60,000,000 and the Andian National Corp., Ltd., $25,000,000, these two companies being under one manager. The report of the inspector states that the Tropical Oil Co. is the only producing and refining company in Colombia. The production of this company for June, 1931, was 1,435,185 bbls. as compared with 1,695,845 bbls. in June, 1930.

The inspector's report shows the total crude oil produced in the Mares Concession up to June 30, 1931, was 92,620.987 bbls., the revenue of the government from the royalties from this production being 6,456.160 pesos up to December 31, 1930.

The Tropical Oil Co. has recently curtailed its production 12 per cent because of low price and competition, the inspector's report stating:

"The considerably lower price of crude oil in the North American markets and the bitter struggle of competition started between the so-called independent producers and the large organizations which produce oil outside of the United States brought as a result the curtailment of oil production in the South American fields."

Because of this curtailment the employes and laborers of the Tropical Oil Co. were reduced from 4,716 by 1,818, so that on April 30, 1930, the personnel numbered 2,898 employes and laborers.

The reductions in the Andian Oil Co. were less than in the case of the Tropical.

CO-OPERATIVE RESEARCH COMMITTEE ADOPTS TEST

(Continued from Page 17)

and the combustion chamber. The movement of the cylinder required too many turns of the hand crank and the cylinder rocked and vibrated up and down while it was being moved, necessitating clamping the cylinder before taking a reading. The valve gear was unsatisfactory since it was noisy in operation.

Figure 7 is a diagrammatic section of the new variable-compression cylinder built to overcome these criticisms. Its one-piece construction eliminates the gasket unreliability, any cooling difficulty and spark-plug and bouncing-pin pockets, and gives a vertical bouncing-pin position. The lower end of the cylinder barrel is now finished to close limits on the outside and piloted in a guide member inserted between the crankcase top and the cylinder sleeve. The addition of this feature prevents rocking of the cylinder because of the great increase in length of the effective cylinder-guide. Four springs have been located in pockets between the cylinder and the sleeve to take up all vertical backlash while moving the cylinder. The speed of cylinder travel has been doubled by using 6 threads per inch instead of 12. Any tendency to develop looseness in the valve-clearance compensating-linkage has been overcome by eliminating the sliding pivot, shown in Figure 3, at the cylinder end of rocker-arm carrier and substituting a fixed pivot. The necessary slight horizontal movement is now obtained by bending in the long vertical support, which has been made of thin section to allow this motion without undue bending stress. A ball-and-socket contactor has been provided at the end of the valve-stem as shown. It is supplied with oil through the hair filled pocket above. The valve-stems are now lubricated by a felt ring riding at the top of the guide which receives surplus oil from the ball-and-socket oiler above. A cup under the bottom of the valve-spring prevents the drippings from running away and supplies a certain quantity of oil by capillary action along the spring. The valve push-rod is now provided with a socket at its lower end to catch and hold oil.

Figure 8 shows an assembly of engine and induction-motor power-absorption equipment. The induction motor is of the slotted-rotor type, so that it maintains a practically constant speed. This makes a very desirable automatic speed-control and relieves the operator of all effort in this respect. The engine is of the variable-compression type with the one-piece cylinder construction, and it incorporates all of the refinements previously described. The fixed-compression cylinder can be substituted when desired. This engine represents the committee's latest views on a standardized fuel-testing outfit, and it is hoped that future tests will warrant the making of formal recommendations on the part of the committee.

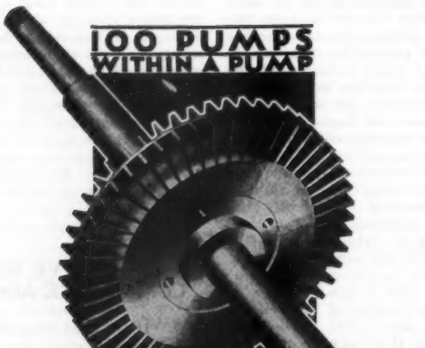
NORTH AND WEST TEXAS

(Continued from Page 28)

Cable Oil Co.'s No. 22 L. A. Snider, 800 feet west and 150 feet south of northeast corner of Robert Wilson Survey, location.

Hamilton & Helm's No. 3 Russell & Co., center of the south 40 acres of the north 130 acres of the W. R. Pender Survey, spudding.

King Royalty Co.'s No. 29 J. E. Larimore, 2,250 feet west and 750 feet north



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WESTCO *TURBINE* PUMPS

SINGLE STAGE—HIGH PRESSURE

of northeast corner, Section 2,246, T.E.& L. Survey, drilling 75 feet.

Kleiner & Rigg's No. 3 J. F. Larimore, 450 feet north and 450 feet east of southwest corner 91-acre tract in Section 22, T.E.&L. Survey, drilling 600 feet.

C. C. Mason's No. 1 S. R. Jeffery "B," 150 feet north and 150 feet west of southeast corner of Section 46, T.E.&L. Survey, spudding.

George Mollenkoph's No. 1 S. R. Jeffery "D," 170 feet north and 450 feet east of southwest corner of N half SE, Section 50, T.E.&L. Survey, location.

Petroleum Producers' No. 1 H. F. Haygood, 1,056 feet west and 800 feet north of southeast corner, Section 1,468, T.E.& L. Survey, moving in.

L. V. Wood's No. 1 M. Brooks, 300 feet east and 150 feet south of northwest corner, Section 637, T.E.&L. Survey, spudding.

B. Seitz' No. 4 W. T. Finch and others, 466 feet south and 150 feet west of northeast corner, Section 31, T.E.&L. Survey, location.

Wellis and others' No. 7 Belknap Coal Co., 450 feet south and 150 feet east of northwest corner of west 40 acres of Section 22, T.E.&L. Survey, spudding.

Wooten & Reed's No. 1 J. W. Davis, 2,210 feet north and 1,487 feet east of southwest corner of west 300 acres of Section 4, Galv. Br. & Navigation Co. Survey, rig up.

NORTH TEXAS PRODUCTION
Week Ending October 24

Panhandle district—	
Carson County	5,524
Gray County	43,646
Hutchinson County	13,718
Moore County	1,854
Wheeler County	347
Total production this week	65,089
Total production last week	64,918
Increase	171
Wichita Falls district—	
Archer County	12,787
Baylor County	630
Clay County	526
Cooke County	1,628
Foard County	70
Haskell County	26
Jack County	2,088
Montague County	3,674
Throckmorton County	512
Wichita County	18,174
Wilbarger County	13,447
Young County	12,311
Total production this week	65,873
Total production last week	62,736
Increase	3,137
Ranger district—	
Brown County	3,084
Callahan County	1,602
Coleman County	2,250
Comanche County	762
Palo Pinto County	367
Eastland County	2,805
Shackelford County	3,327
Stephens County	4,404
Total production this week	18,601
Total production last week	17,680
Increase	921

NO IMPORTANT CHANGES IN GULF COAST PRICES

HOUSTON, Tex., Oct. 26.—No important changes were indicated in refinery markets on the Gulf Coast the past week. General firmness continued to rule the gasoline situation in line with the stiffness which has existed throughout other areas. The week apparently saw the removal of virtually all cheap material which for several weeks has served to prevent any important advances in the general coastal market and with further strengthening substantial advances are expected.

At present the market seems to be marking time pending the outcome of the East Texas situation with much depending on the decision on the Brock Lee Oil Co. proration case which will be heard by federal court in Beaumont, Tex., Thursday. If a permanent injunction against the Railroad Commission enforcing proration against properties of that company is refused and continued proration of East Texas is assured a material strengthening in all markets probably will follow. If the injunction is granted it will mean a decided weakening influence on the crude situation which may be reflected in refinery markets.

Fuel oils continued to be held at a minimum of 40 cents in bulk cargo lots, although bunker prices were reduced the preceding week to 45 cents. While this market displays no strength yet there is a mark of steadiness at present levels. Gas oils remained firm with the bulk of this material pretty well contracted up.

The heavier viscosity pale and red oils still have failed to reflect in price the tight position in which they are being held on the coast. The market on these continues strong with the lighter viscosity oils steady in price, reflecting the strength of the heavier oils.

Champlin Co. Appeal On Martial Law Now With Supreme Court

WASHINGTON, D. C., Oct. 26.—The supreme court was asked today to review Governor Murray's military control of Oklahoma oil fields in an appeal brought by the Champlin Refining Co.

The company attacked both the law and Murray's enforcement of it by the militia, but a three-judge federal court below rejected the attack in a two to one decision.

While the appeal was from a proration order of the state corporation commission, attorneys said the entire question, including the martial law order, is involved.

George S. Ramsey of Tulsa, and Harry O. Glasser of Enid are attorneys for the oil company.

FORT WORTH, Tex., Oct. 26.—Within 60 days the appeal record will be filed in the United States Supreme Court in the Macmillan oil proration injunction case, decided adversely to the Railroad Commission by a three-judge federal court at Houston, it was said by Marion S. Church of Dallas and R. E. Hardwicke of Fort Worth, attorneys for the central proration committee.

Similar appeals are on the way to the court of last resort from California and Oklahoma, to which will be added the Texas controversy. It is considered probable that the supreme court will set all the proration cases for a joint submission. It will not be necessary to appeal the Texas case through a United States Circuit Court of Appeals but direct to Washington from the three-judge tribunal at Houston.

ORDER IS BOOKED FOR 125 MILES OF 8-INCH

(Continued from Page 30)

character, fairly well distributed as to lines of consumption. Tin plate as usual in a depression does better than other steel products, while freight car building is almost nothing. Fabricated structural steel shipments decreased from July to August but have since held the reduced pace quite well. There is a large tonnage on the books of the fabricating shops but some of it is in jobs requiring a long time for execution.

NEW MAP OF EAST TEXAS

The Zingery Oil Map Co. of Fort Worth has prepared a new map of the East Texas oil fields covering Rusk, Gregg, Smith and Upshur Counties. It is called the "official map of the East Texas oil fields" as it was compiled from records in the office of the Railroad Commission of Texas. Needs arising as a result of recent legislation and rulings of the Railroad Commission concerning allowable production and dividing the field into 20-acre units made it necessary to make the map, according to the mapping company. The field is mapped into three parts—the north third, the middle third and the south third—and the map is on a scale of 1,000 feet to the inch.

W. BIERKAMP, JR., DIES

FORT WORTH, Tex., Oct. 26.—William Bierkamp, Jr., 55, of Fort Worth, president of the Advance Oil Co., which he formed in 1919, died in Durant, Iowa, Sunday, from heart disease.

EAST CENTRAL TEXAS WILDCATS

(Continued from Page 26)

FREESTONE COUNTY

Raley and Clark's No. 1 McLancaster (Pampier), 150 ft. from E of W line and center of N and S line B. Avant Sur. ..... **Derrick.**

GREGG COUNTY

Alma Petroleum Co.'s No. 1 J. B. Watson, 330 ft. from S line and 330 ft. from E line of 35-ac. tract, Thompson Allen Sur. ..... Spudded.

Angles and Daniel's No. 1 J. C. Clarborne, 335 ft. from N line and 164 ft. from E line of NW cor. of Clarborne 50-ac. tract in the L. Baty Sur. ..... Drlg. 3,660 ft.

Artic Petroleum Co.'s No. 1 King, 57 ft. S of most northerly NW cor. and 104 ft. E at right angles in 2-ac. tract, Chisum Sur. ..... Fishing.

Atlantic and Pacific's No. 1 O. R. Johnson, 340 ft. from S line and 390 ft. from W line of survey, L. J. Rigsby Sur. ..... Derrick.

Barnsdall Oil Co.'s No. 1 G. E. Adams, 1,150 ft. from S and 3,720 ft. from W of G. W. Hooper Sur. ..... Total depth 3,525 ft.; waiting on cmt. to set.

Bishop Oil Corp.'s No. 1 Richie, N offset to Shasta Oil Co.'s No. 1, Carl Rhodes Sur. ..... Set 10-in. csg. 102 ft.

Brannon et al's No. 1 W. A. Horton, center of 2-ac. lease, John Ruddle Sur. ..... Drlg. 3,320 ft.

Buchanan et al's No. 1 George Ritchie, 120 ft. N and 15 ft. W of Monzell and Currie's No. 1 Church Block No. 4, M. Dillard Sur. ..... Derrick.

Bramlette's No. 1 Goforth, 170 ft. due N of NW cor. of Sun-Hilburn-Lloyd lease in Chisum Sur. ..... Rig up and shut down.

Bob et al's No. 1 T. L. Broy, 290 ft. from E and 1,640 ft. from S of H. A. Holdt Sur. ..... Derrick.

M. T. Beeler's No. 1 Finley and Thomas, 150 ft. from N and 150 ft. from W of 10-ac. lease, C. H. Alexander Sur. ..... Derrick.

Branson et al's No. 1 J. J. Fuller, 1,050 ft. from N and 170 ft. from W of survey, M. Alexander Sur. .. Derrick.

Cal Pet. Corp.'s No. 1 M. Clemmens, 250 ft. from S line and center of E and W lines of lease, M. Mann Sur. ..... Drlg. in oil sand 3,678 ft.

T. J. Connor's No. 1 Forshee estate, 150 ft. from N line and 150 ft. from W line of lease, H. R. Hokit Sur. ..... Drlg. 2,610 ft.; top Pecan Gap 2,500 ft.; drlg. chalk 2,610 ft.

Cox and Hammon's No. 1 L. E. Lacy, 330 ft. from E line and 100 ft. N of railroad, J. Ruddle Sur. ..... Set csg.; waiting on cement.

Cox and Hammon's No. 1 L. A. Rodden, 349 ft. from N line and 330 ft. from W line of 110-ac. tract, L. J. Rigsby Sur. ..... Top sand 3,559 ft.; total depth 3,574 ft.; testing.

Campbell and Lee's No. 1 A. Johnson, 170 ft. from N line and 134 ft. from E line of 11-ac. lease in the M. Dillard Sur. ..... **Set 10-in. csg. 886 ft.**

Columbia Oil & Gas Co.'s No. 1-A Harley, 650 ft. E and 300 ft. S of SE cor. of Laura Walker 45-ac. tract, William Robinson Sur. ..... **Derrick.**

D. L. Hoffman's No. 1 Bumpass, 360 ft. from S line and 260 ft. from W line of 10-ac lease, W. H. Castleberry Sur. ..... Location.

Devonian Oil Co.'s No. 1 L. C. Ingram, 1,120 ft. from N and 1,000 ft. W of SW cor. of survey, B. W. Witchet Sur. ..... Waiting on cmt. to set.

Empire Gas & Fuel Co.'s No. 1 J. T. Jeter, 317 ft. from S line and 150 ft. from E line of D. B. Choate Sur. ..... Set 10-in. csg. 900 ft.; waiting on cmt. to set.

Ethridge's No. 1 Weiss, 330 ft. from W line and 330 ft. from S line of survey, Juan Armendaris Sur. .... Base Pecan Gap 2,980 ft.; waiting on cmt. to set.

E. E. Fogleson's No. 1 J. B. Doley, 150 ft. from S line and 460 ft. from W line of tract, W. M. Castleberry Sur. ..... Derrick.

Grossy et al's No. 1 Morgan, 325 ft. from N and 900 ft. of Martha Dillard Sur. ..... Base Pecan Gap 2,900 ft.; top Austin 3,512 ft.; top sand 3,600 ft.; set csg.

Harper Petroleum Corp.'s No. 1 Woodley Jones, 2,000 ft. from N line and 3,900 ft. from E line of William H. Castleberry Sur. ..... **Derrick.**

Humble Oil & Refining Co.'s No. 1 H. M. Lawrence, 540 ft. from N and 219 ft. from W of 100-ac. tract, David Ferguson Sur. ..... **Derrick.**

Johnston's No. 1 Williams, 125 ft. from N and W of 2-ac. tract, Van Winkle Sur. ..... **Derrick.**

K. B. Oil Co.'s No. 1 Dickson, 150 ft. from S and 150 ft. from W of 5-ac. lease, Mary Van Winkle Sur. ..... Shut down 700 ft.

Kiltner and Easterling's No. 1 Missie Young, 230 ft. S and 250 ft. E of SW cor. of the H. Edwards Sur. in the C. Rhodes Sur. ..... Base Pecan Gap 3,110 ft.; shut down 3,250 ft.

Kimsey-Trimble's No. 1 Griffith Davis, 922 ft. E of N line of Griffith Davis 119.5-ac. tract from NW cor. of same and 145 ft. at right angles, W. P. Chisum Sur. ..... **Waiting on cement 3,630 ft.**

Lockhart et al's No. 1 Jones, 200 ft. from N and center E and W of 19-ac. lease in Hooper Sur. ..... Top Pecan Gap 2,690 ft.; base

Gold Star Oil Co.'s No. 1 J. A. Butts, 165 ft. from NE offset to Ray L. Martin's No. 1 Dickson, Mary Van Winkle Sur. ..... 3,052 ft.; drlg. 3,618 ft.

Magnolia Pet. Co.'s No. 1 Everett, 252 ft. from S line and 734 ft. from W line of lease, L. J. Rigsby Sur... Running 8-in. csg. 3,530 ft.

O'Neil and Wallace's No. 1 E. L. Walker, 330 ft. N of S line of lease and 330 ft. SW of center of river on 20-ac. lease, John Tate Sur. ..... Set 10-in. csg. 70 ft.

Prairie Oil & Gas Co.'s No. 1 Thomas, 330 ft. from N line and 375 ft. from E line of lease, J. M. Norris Sur. ..... Rigging up.

Prairie Oil & Gas Co.'s No. 1 W. H. York, 620 ft. from W line and 1,900 ft. from S line of survey, M. Dillard Sur. ..... Derrick.

Ross et al's No. 1, located on Findley & Thomas 50-ac. tract, 150 ft. from S line of 6.66-ac. lease, C. H. Alexander Sur. ..... **Derrick.**

Ryan Consl. Pet. Corp.'s No. 1 King, center of 10-ac. lease out of NW cor. of Shell's 176-ac. tract, Geo. A. Thompson Sur. ..... Derrick.

M. C. Sellie's No. 1 Robert Fisher, 263 ft. from E line of survey and 265 ft. S of center of highway, Wm. G. Painter Sur. ..... Set 10-in. csg. 70 ft.

Simplex Oil Co.'s No. 1 J. E. Lawther, 330 ft. from S line and 330 ft. from W line of 36.5-ac. lease, John Mofftitt Sur. ..... Set 6⅝-in. csg. 3,560 ft.

Stanolind Oil & Gas Co.'s No. 1 Nancy Redford, 478 ft. from S line and 462 ft. from W line of 19-ac. tract, John Blair Sur. ..... Drlg. 1,568 ft.

Stanolind Oil & Gas Co.'s No. 1 Beulah Jones, 320 ft. S line and 378 ft. from E Line of 100-ac. tract, G. W. Hooper Sur. ..... Rigging up.

Sun Oil Co.'s No. 1 Calvin Brown, 320 ft. from most southerly S line and middle of E and W lines of lease, L. B. Outlaw Sur. ..... Coring 3,602 ft.

Tom C. Patten's No. 1 George Walter, center of 1-ac. tract and 396 ft. from W line of lease, Mary Van Winkle Sur. ..... Derrick.

Tidal Oil Co.'s No. 1 Lake Divernia Fish and Game Club, 300 ft. from N and 550 ft. from W lines of tract in William G. Painter Sur. ..... Location.

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These grooves do not weaken the screen body, either for tensile or collapsible strength. Severe laboratory tests have proven it capable of standing 8,000 feet of drill pipe.

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Los Angeles, Calif.

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Valentine Oil Co.'s No. 1 Goyne-Hughey, 6,100 ft. from S and 6,800 ft. from W of survey, Mary Van Winkle Sur. ..... Rigging up.
Ziegler Oil Co.'s No. 1 L. D. Campbell, 540 ft. from N and 219 ft. from E of 72½-ac. tract, David Ferguson Sur. ..... Derrick.

HENDERSON COUNTY

Seven Wells Corp.'s No. 1 Douglas, 767 ft. from N and 833 ft. from E of tract in K. H. Douglas Sur. ..... Drlg. 1,625 ft.

HOPKINS COUNTY

Roark et al's No. 1 Taylor, 220 ft. from N and W lines of 80-ac. tract in the John Polk Sur. ..... Shut down 540 ft.

HOUSTON COUNTY

Apex Drlg. Co.'s No. 1 Thompson Bros., 250 ft. out of NW cor. of 200-ac. tract in John Shears Sur. ..... Shut down waiting orders.

Ramsland and Ramsland's No. 1 Pennington, 750 varas W of E line and 500 varas from S line of survey on 186-ac. tract, Ramond LaGarza Sur. ..... Shut down 1,653 ft.
Phillips and Phillips' No. 1 Kennedy Bros., 485 varas out of SW cor. of 100-ac. tract, Jose M. Procella Sur. ..... Rig up and shut down.
Snow's No. 1 Harron, 300 ft. out of NE cor. of 327-ac. tract, J. P. Procella Sur. ..... Spudded and shut down 37 ft.

HUNT COUNTY

Branson et al's No. 1 Gray ..... Location.
Foster and Earl's No. 1 Whitney and Clark, 150 ft. out of NW cor. of 50-ac. tract in W. H. Landrum Sur. .. Shut down 350 ft.
M. S. Hammond's No. 1 W. H. Adams ..... Location.
M. S. Hammond's No. 1 R. L. Gray ..... Derrick.
Russell et al's No. 1 Brooks and Quattlebaum ..... Shut down 1,455 ft.

LAMAR COUNTY

Indian States Oil Co.'s No. 1 W. T. Watson in Ignatius Aud Sur. ..... Shut down 4,026 ft.
Puritan's No. 1 George Parr, 2,000 ft. from W of Frisco Railway and 1,000 ft. from E line of R. Russell Sur. ..... Rigging up.

LEON COUNTY

Cooper et al's No. 1 Lynch, 4,000 ft. from W line and 250 ft. N from the S line of Thomas H. Gardner Sur., and in 200-ac. tract ..... Preparing to start up; T. D. 1,931 ft.
Sun Oil Co.'s No. 2 Grayson ..... Cored Eagleford shale 4,524 ft.

MORRIS COUNTY

Dumas et al's No. 1 Tom Ball, 1,046 ft. from E and 248 ft. from S of 71-ac. tract, A. S. Young heirs Sur. ..... Derrick.

NACOGDOCHES COUNTY

Sunte et al's No. 1 A. F. Boatman, 330 ft. from S and 150 ft. from W of 67-ac. tract, William A. Moore Sur. ..... Shut down 1,605 ft.
Churchill-Armstrong's No. 1 Max W. Hart, 2,640 ft. from N line and 2,640 ft. from S of N line of survey, George Follett Sur. ..... Derrick.
Foreman and Weller's No. 1 Norris, 60 ft. NW of E line and 420 ft. S of road in 73.5-ac. tract, Hosses Y. Barbo Sur. ..... Derrick.
Gaimer et al's No. 1 Nice Well, 15 miles SE of Nacogdoches, 600 ft. from S and 150 ft. from W of Wells tract in A. Cherino Sur. ..... Drlg. 3,430 ft.
Joiner and Henson's No. 1 Andy Legg, 330 ft. from N and 330 ft. from W of tract, John Durst Sur. ..... Shut down 3,920 ft.
Scully & Harwell's No. 1 R. I. Driver, 1,500 ft. from SE cor. of P. B. Ballard 135-ac. tract, 15 miles SE of Nacogdoches in Patricia De Torres Sur. ..... Shut down 2,642 ft.
Taylor-Vaughn's No. 1 Dixon Greer, 160 ft. from W and 450 ft. from N lines of 60-ac. tract in the M. G. Herrera Sur. ..... Shut down 250 ft.; shale.
Big Indian Oil Co.'s No. 1 J. N. Stewart, center of 79-ac. tract in the Jose Ignacio Ybarbo Sur. ..... Shut down 2,335 ft.

RAINS COUNTY

Berry and Hale's No. 1 Ownsby, 150 ft. N and 1,100 ft. from E of most easterly SE cor. of survey, Alexander Sur. ..... Preparing to start drlg.; T. D. 1,-095 ft.

RED RIVER COUNTY

Doyle and Jondreau's No. 1 V. S. Griffin, 700 ft. from N line and 650 ft. E of W line of survey, J. C. Brown Sur. ..... Derrick.
Droppleman and Bundy's No. 1 J. W. Cunningham, 250 ft. from the S and 1,066 ft. from the E lines of B. M. Ballard Sur. ..... Rig up.
Harris & Joiner's No. 1 E. Howison, 225 ft. S, 185 ft. W of 79-ac. tract, William Humphreys Sur. ..... Shut down 1,904 ft.
Concord Oil Co.'s No. 1 J. R. Dellahunty, 500 ft. from N of Isaac Moore Sur. and 200 ft. E of E line of Robert Glass Sur. ..... Shut down 816 ft.

ROCKWELL COUNTY

J. F. Barron's No. 1 H. L. Lofland, center of 69-ac. tract in W. M. Bird Sur. ..... Waiting on csg.; T. D. 130 ft.

RUSK COUNTY

Chapman's No. 1 W. M. Futch, 330 ft. from N line and 500 ft. from E line of survey and lease, Jos English Sur. ..... Derrick.
Weaver and Crim's No. 1 Bean, 330 ft. from S line and midway between E and W lines of lease, H. Hobson Sur. ..... Derrick.
Tex-Jersey Oil Corp.'s No. 1 G. W. Eaton, center of 1.54-ac. tract, F. Cordova Sur. ..... Derrick.
Carl G. Willie's No. 1 Joe Lee, old well being drilled deeper, 330 ft. from S and E line of 50-ac. tract, Geo. Berry Sur. ..... Total depth 3,794 ft.

KILGORE AREA—RUSK COUNTY

Friedman Oil Corp.'s No. 1 Mayfield, 330 ft. from N line and 330 ft. from W line of 20-ac. lease, W. R. Cooke Sur. ..... Base Pecan Gap 3,068 ft.; top Austin 3,465 ft.; set 6⅝-in. csg. 3,655 ft.
Harry Elliott's No. 1 Carroll, 175 ft. from N and 200 ft. from E of 7-ac. tract, W. R. Cook Sur. ..... Location.
Magnolia Pet. Co.'s No. 1 W. P. Moore, 330 ft. from N line and 330 ft. from S line of lease, J. Ellington Sur. ..... Base Pecan Gap 3,015 ft.; top sand 3,675 ft.; total depth 3,681 ft.
Raitman's No. 1 W. P. Moore, 240 ft. from S and 330 ft. W of NW cor. of W. P. Moore 25-ac. lease, H. Wiggins Sur. ..... Rigging up.
Gulf Production Co.'s No. 1 Hoxey Johnson, 1,100 ft. from N line and 225 ft. from E line of H. B. Dance Sur. ..... Location.

JOINER POOL—RUSK COUNTY

Armstrong's No. 1 Alford, 151 ft. from S and 1,080 ft. from W of survey, T. J. Moore Sur. ..... Derrick.
Astnon's No. 1 Alford, 280 ft. out of NE cor. of 11-ac. lease, H. H. Penny Sur. ..... Drlg. 1,500 ft.
Golding and Murchison's No. 1 Griffin, 539 ft. from N line and 115 ft. from W line of lease, J. B. Cadena Sur. ..... Waiting on cmt. to set.
Jackson's No. 1 H. C. Minor, 210 ft. from N line and 330 ft. from E line and center of W and S lines of 27-ac. lease, William Killen Sur. ..... Drlg. 1,320 ft.
Mass and Tucker's No. 1 Matthews, 3,244 ft. from N, 4,854 ft. from E, Dalines Cartimas Sur. ..... Shut down 3,300 ft.
Paulett et al's No. 1 Ed Sparks, 350 ft. from E, 150 ft. from S of survey, L. C. Riggs Sur. ..... Shut down 2,121 ft.
Oliphant et al's No. 1 W. Alford, 330 ft. from S line and 330 ft. from E line of 40-ac. lease ..... Drlg. 3,600 ft.
Pitts et al's No. 1 Freeman, 1,000 ft. N of S line and 1,000 ft. E of W line of 131-ac. tract, J. Watkins Sur. ..... Rig blew down.

Priest et al's No. 1 Mayfield, 155 ft. from N and W lines of 22-ac. lease in Daniel Clark Sur. ..... Drlg. 2,630 ft.
Ramussen et al's No. 1 F. J. Cox, 330 ft. from S line and 330 ft. from W line of tract, R. H. Penny Sur. ..... Waiting on cement.
Stroube and Stroube's No. 1 Barton, 500 ft. N of Stroube and Collins' No. 1 Barton M. McCabe Sur. ..... Top Austin chalk 3,570 ft.; base Austin chalk 3,706 ft.; top sand 3,706 ft.; total depth 3,751 ft.
Vitex Oil Co.'s No. 1 Irion, 150 ft. from S and E of most easterly SE cor., Mary Hughes Sur. ..... Shut down 1,200 ft.

SMITH COUNTY

Brookshire et al's No. 1 S. S. Cook, 200 ft. from S line and center of E and W lines of 10-ac. tract in Juan Vargus Sur. ..... Set 12½-in. csg. 145 ft.
Bunte et al's No. 1 Atkinson, 1,000 ft. from S line and 1,000 ft. from N line of 330-ac. tract, Calloway Dean Sur. ..... Derrick.
Cotton Belt Oil Co.'s No. 1 C. S. Jackson, 500 ft. from N and 500 ft. from W of 39.85-ac. tract, Henry Mickleborough Sur. ..... Fishing for drill stem; T. D. 4,-095 ft.
H. M. Lemaster's No. 2 T. W. Wright, center of E 4 acres of an 8-ac. tract in the Juan Vargus Sur. ..... Derrick.
Morrison's No. 1 I. Roy, 330 ft. N and E from SW cor. of 87-ac. tract in Henry Cook Sur. ..... Coring 3,985 ft.
McCarty et al's No. 1 Cross, 200 ft. from E and S of 13-ac. tract, T. Burbridge Sur., ¾ mile SW Lindale. Set 10-in. csg. 72 ft.
McCarty et al's No. 1 Taylor, 250 ft. from S and W of 73-ac. lease, F. M. Taylor Sur. ..... Set 10-in. csg. 33 ft.; shut down.
Tytex Oil Co.'s No. 1 Alex Weldert, 2,030 ft. from S and 525 ft. from E lines of Franklin T. Bodenheimer Sur. ..... Derrick.
Wycliffe and Randall's No. 1 S. S. Cooke, center of 10-ac. lease, Juan Vargus Sur. ..... Rig up.

TITUS COUNTY

Perry V. Cook's No. 1 M. C. Rogers, center of SW of Moore Sur. ..... Shut down 2,603 ft.
Joiner et al's No. 1 Clayton Brown, 1,300 ft. from E and 400 ft. from most northerly S line of V. Evans Sur. Shut down 2,250 ft.
Venza Oil Co.'s No. 1 McGill, 450 ft. from S and 662 ft. from W of H. C. Riggs Sur. ..... Drlg. 6,350 ft.

UPSHUR COUNTY

Cal Petroleum Corp.'s No. 2 W. F. Glynn, 909 ft. from S line and center of E and W lines of tract, G. W. Hooper Sur. ..... Derrick.
Cal-Tex Corp.'s No. 1 Taylor, 250 ft. N and E of SE cor. of Hargrave lease, Marshall Mann Sur. ..... Set 6⅝-in. csg. 3,590 ft.; waiting on cmt. to set.
C. G. Glasscock's No. 1 T. M. Collins, center of 1-ac. tract in the Marshall Mann Sur. ..... Derrick.
Callahan et al's No. 1 Lee R. Kay, 660 ft. from N and E lines of Charles O'Neal Sur. ..... Derrick.
Calhoun et al's No. 1 J. R. Penn, 265 ft. from S line and E line of Penn 104-ac. tract, Joseph Manning Sur. ..... Shut down 3,718 ft.
Cole and Butler's No. 1 D. P. Guest, 300 ft. out of NE cor. of Guest 139-ac. tract and survey ..... Derrick.
Cranfill & Reynolds' No. 1 Milton Rash, 1,687 ft. E of W line and 330 ft. N of S line of Rash estate, E. N. Eubanks Sur. ..... Derrick.
Daisy Oil & Gas Co.'s No. 1 B. F. Phillips, 200 ft. out of SE cor. of 64-ac. tract, P. Whitestone Sur. ..... Waiting on cmt. to set 3,722 ft.
Eastland Oil Co.'s No. 1 O. M. Victory, 330 ft. from S line and 500 ft. from the W line of survey, E. A. J. Evans Sur. ..... Drlg. 2,600 ft.
Glasscock et al's No. 1 T. Wells, 250 ft. from N line of survey and 1,300 ft. from W line of farm on gin site tract, G. W. Hooper Sur. ..... Derrick.
Glasscock Bros.' No. 1 Collins, 90 ft. from N line and 90 ft. from W line of lease, G. W. Hooper Sur. ..... Location.
Hinsiow's No. 1 Taylor, 330 ft. from E and S of 192-ac. tract in Gonzalez Sur. ..... Rigging up.
Humble Oil & Refining Co.'s No. 1 J. Phillips, 330 ft. from N line and 330 ft. from W line of lease, H. Edwards Sur. ..... Set 10-in. csg. 102 ft.
Humble Oil & Refining Co.'s No. 1 C. T. Shelton, 330 ft. from W line of S 59-ac. tract and 369 ft. from S line of survey, William King Sur. ..... Derrick pattern.
A. D. King's No. 1 Lloyd, 156 ft. from N line of survey and 288 ft. from E line of 4-ac. tract, D. Sanches Sur. ..... Testing 3,690 ft.
J. L. Roberts' No. 1 Anna L. Jenkins, 330 ft. from E line and center of N and S lines of 37.5-ac. tract, H. Edwards Sur. ..... Rig up and shut down.
Sun Oil Co.'s No. 1 T. C. Raney, 250 ft. from S line and 200 ft. from W line of lease ..... Derrick pattern.
Treco Oil Co.'s No. 1 A. D. Adkins, center of 6-ac. lease in the William King Sur. ..... Base Pecan Gap 3,095 ft.; top Austin chalk 3,694 ft.; set 6⅝-in. csg. 3,715 ft.
Smith Bros.' No. 1 J. W. Davis, 400 ft. from N and 800 ft. from W lines of S 200 acres of J. W. Davis 380-ac. tract in John Burleson Sur. ..... Set 10-in. at 97 ft.
J. R. Smith's No. 1 J. B. Webb, 200 ft. N and 489 ft. W of SE cor. of W 20 acres of 71-ac. tract, G. W. Hooper Sur. ..... Derrick.
Sorrels & Duffey's No. 1 J. W. Wooden, 200 ft. from E and 200 ft. S of survey, Isham Williams Sur. ..... Missed core 3,693-98 feet, drill stem test, 4 fourbles salt water and mud.
Wheeler et al's No. 1 Webb, 300 ft. from N and 100 ft. E of road, approximately 4,840 ft. from W and 1,920 ft. from N of Hooper Sur. ..... Base Pecan Gap 3,025 ft.; top Austin chalk 3,630 ft.; base 3,682 ft.; top sand 3,688 ft.; total depth 3,706 ft.
Wolf's No. 1 Cook, center of 115-ac. tract in Jacob Walker Sur., 5 miles W of Rosewood ..... Location.

VAN ZANDT COUNTY

Barton et al's No. 1 C. L. Hubbard, 600 ft. out of NE cor. of Hubbard 225-ac. tract, 3½ miles S of Canton, M. J. Cadena Sur. ..... Shut down 2,000 ft.
Kelly Oil & Gas Co.'s No. 1 Lemsford, center of Lemsford tract, John Conner Sur. ..... Shut down 2,300 ft.
W. P. Palmer et al's No. 2 W. P. Forster, 600 ft. from N and 450 ft. from E of SW cor. of Forster 151-ac. tract in the F. Montgomery Sur. ..... Shut down 3,393 ft.
Pure Oil Co.'s No. 4 W. A. York, 990 ft. W of E line and 660 ft. S of N line of W. A. York 50-ac. tract, John Walling Sur. ..... Preparing to set csg.
Van Oil Association's No. 1 Tankersley, 200 ft. from E and 1,000 ft. from S of farm, L. Landers Sur. ..... Coring 2,850 ft.

WOOD COUNTY

Brennan and Wood's No. 1 L. W. Mings, 300 ft. from NW cor. of survey and tract, Moses Stripling Sur. .. Derrick.
Pure Oil Co.'s No. 1-T V. T. Davis, 400 ft. N of N line of Tunnell No. 8 lease, 480 ft. W of E line of Sur., Nacogdoches County School Land Sur. ..... Moving in tools.
Pure Oil Co.'s No. 4 J. A. Bracken, 735 ft. E of W line and 782 ft. N of S line of lease in John Walling Sur. .. Drlg. 280 ft.
Pure Oil Co.'s No. 7 R. A. Tunnell, 733 ft. E of W line and 711 ft. S of N line of lease in John Walling Sur. .. Cement setting 304 ft.
Pure Oil Co.'s No. 13 R. L. Wells, 200 ft. N and 695 ft. E of NE cor. of Mary P. Neils' 100-ac. lease, Mund Gross Sur. ..... Rig up.
The Texas Co.'s No. 2 J. A. Bracken, 883 ft. N of S line and 250 ft. E of W line of lease in John Walling Sur. ..... Rigging up.

WILDCAT OPERATIONS IN WEST TEXAS

(Continued from Page 28)

EL PASO COUNTY

Tri-State Oil Co.'s No. 1 Bobadella, 1,325 ft. from S and E lines Sur. 254, S.P. No. 7,247 ..... Underreaming 8¼-in. casing, 1,725 ft.

FISHER COUNTY

The Texas Company's No. 1 Daniels, 357 ft. from S and 330 ft. from W lines of Sec. 194, Blk. 1, B.B&C. Sur. ..... Shut down 3,085 ft.; standardizing.

Cranfill & Reynolds' No. 1 George, 400 ft. from N and 330 ft. from E, Sec. 200, Blk. 1, B.B.&C. Sur. ..... Total depth 3,230 ft.; running 5-in. casing.

Cranfill & Reynolds' No. 1 Snipe, 330 ft. from N and W lines of Sec. 195, Blk. 1, B.B.&C. Sur. ..... Location.

GAINES COUNTY

Texas Consolidated Oil Co. et al's No. 1 Jones, 2,312 ft. from NE Sec. 4, Blk. A-8, P.S.L. Sur. ..... Total depth 4,700 ft.

GARZA COUNTY

Pandem Oil Corp.'s No. 1 Justice, 330 ft. from S and W of Sec. 12, Blk. 4, H.&G.N. Sur. ..... Spudded and shut down.

Penny & Posey's No. 1 Justice, 1,980 ft. from S and 1,680 ft. from E of Sec. 25, Blk. 6, H.&G.N. Sur. (3,500-ft. cable tool test) ..... Total depth 3,202 ft.

HOWARD COUNTY

Green O. & R. Co.'s No. 1 Denman, 990 ft. from S and 2,310 ft. from W Sec. 14, Blk. 29, Twp. 1s, T.&P. Sur. .. Spudded and shut down.

Merrick & Lamb's No. 2 Chalk, 990 ft. from the N and W lines of Sec. 126, Blk. 29, W.&M.W.R.R. Sur. ..... Drlg. 2,345 ft.; show oil 2,195 ft.

IRION COUNTY

Davis et al's No. 1 Suggs, 1,560 ft. from S and 925 ft. from W Sec. 3,051, Blk. 28, H.&T.C. Sur. ..... Shut down 4,002 ft.

Denny & Andrews' No. 1-A Tankersley, 200 ft. from S and 2,000 ft. from E of Sec. 709, J. P. Imhoff Sur. .. Shut down 463 ft.

Ellis Flanery Corp.'s No. 1 Nutt, 1,350 ft. from N and 450 ft. from E of Sec. 694, Kheikenholm Sur. ..... Shut down 1,815 ft.; running 6⅝-in. casing.

Stanolind Oil & Gas Co.'s No. 1 Williams, 1,320 ft. from S and E of Sec. 1,196, T.T.R.R. Sur. ..... Shut down 6,725 ft.

Straughn & Adkins Bros.' No. 1 Lee, 1,080 ft. from W and 420 ft. from N of Sec. 729, C. Kaiser Sur. ..... Underreaming 10-in. casing 975 ft.

JONES COUNTY

Abers et al's No. 1 Burton, 150 ft. from S and 175 ft. from E of 43.4-acre tract in G. Martinez Sur. ..... Shut down 1,005 ft.

LOVING COUNTY

Ervin & Mahres' No. 1 Thrope, 2,310 ft. from E and 330 ft. from S Sec. 46, Blk. 53, T.&P. Sur. ..... Shut down 810 ft.

Slack's No. 1 Lynd, 990 ft. NE and 330 ft. SE of Sec. 3, Blk. 2, W.&N.W. Sur. ..... Drlg. 2,515 ft.

Falbre & Evans' No. 1 Dean, 330 ft. from NE and 990 ft. from NW Sec. 79, Blk. 33, H.&T.C. Sur. ..... Shut down 2,500 ft.

Lewis & Slagel's No. 1 Johnson, 330 ft. from N and 1,650 ft. from W Sec. 6, Blk. 56, Twp. 1, T.&P. Sur. .. Spudded and shut down.

Lockhart & Co.'s No. 3 Bowen & Wells, 330 ft. from NE and SE of Sec. 92, Blk. 1, W.&N.W. Sur. ..... Shut down 3,385 ft.

Tennant et al's No. 1 Martin, 990 ft. from NW and SW Sec. 66, Blk. 1, W.&N.W. Sur. ..... Drlg. 1,315 ft.

MENARD COUNTY

Priest's No. 1 Sorrel, 1,000 ft. from E and 200 ft. from S cor. Sec. 132, E.L.R.R. Sur. ..... Shut down 2,860 ft.

PECOS COUNTY

Dittman's No. 1 Sanford, 330 ft. from NW and 1,650 ft. from NE of Sec. 55, Blk. 10, H.&G.N. Sur. ..... Total depth 1,300 ft.

Slaughter et al's No. 1 Sun Yates, 60 ft. S of Sun Oil Co.'s No. 1 Yates, Sec. 59, Blk. 1, I.&G.N. Sur. ..... Moving in material.

REAGAN COUNTY

Carl Cromwell et al's No. 1 University, 1,320 ft. from S line and 1,320 ft. from E line of Sec. 4, University Blk. 7 ..... Spudded 55 ft.

Big Lake Oil Co.'s No. 6-C University, 1,370 ft. from S and 1,000 ft. from E Sec. 12, Blk. 2 ..... Drlg. 2,415 ft.

REEVES COUNTY

Cunningham et al's No. 1 Wright, 1,320 ft. from S and W Sec. 58, Cassel's Sur. ..... Spudded and shut down.

F. McDorman et al's No. 1 Ray-Roberts et al, 6,310 ft. from S and E lines of Sec. 22, Blk. 59, P.S.L. Sur. .. Spudded.

James & Milton's No. 1 Patterson, 330 ft. from N and W of Sec. 21, Blk. 72 ..... Testing water shutoff 3,330 ft.

Lee O. White et al's No. 1 Hershersor, 330 ft. from N and W lines of Sec. 5, Blk. 51, Twp. 10, T.&P. Sur. .. Shut down 5,044 ft.

RUNNELS COUNTY

Dutton et al's No. 1 Dean, 5,475 ft. from NE and 1,648 ft. from NW in J. Heil Sur. No. 519 ..... Shut down 2,700 ft.

SCHLEICHER COUNTY

Eastland Oil Co.'s No. 1 Joe Tisdale, C Sec. 29, Blk. M, G.H.&S.A. Sur. ..... Shut down 4,500 ft.; contract depth.

Wesner et al's No. 1 Nicks, 2,310 ft. from N and 2,362 ft. from E of Sec. 77, Blk. LL, T.C. Sur. ..... Shut down 5,057 ft.

George Wilson's No. 1 Page, Sec. 40, Blk. L, 1,290 ft. from N, 1,570 ft. from W, G.H.&S.A. Sur. ..... Shut down 5,053 ft.

SCURRY COUNTY

J. E. Dickman and R. B. Pender et al's No. 1 F. C. Davis, 1,000 ft. N and 1,770 ft. W of SE cor.of Sec. 275, Blk. 2, E.&T.C. Sur. ..... Shut down 5,100 ft.

Scurry County Oil Exchange's No. 1 Earnest, 2,310 ft. from N and W Sec. 68, Blk. 3, H.&G.N. Sur. ..... Spudded and shut down.

Seifert & Dibble's No. 1 T. M. Blackburn, 2,310 ft. from N and 2,310 ft. from W line of Sec. 153, Blk. 97, H.&T.C. Sur. ..... Shut down 3,500 ft.

Simon & Brock et al's No. 1 Cruse, 2,310 ft. from S and E Sec. 119, Blk. 97, H.&T.C. Sur. ..... Show oil 1,793, 1,820, 1,850 ft.; shut down 2,500 ft.

TERRELL COUNTY

Big Bend Oil Co.'s No. 1 Bassett, C NW Sec. 155, Blk. D, M-K-T Sur. ..... Shut down 2,669 ft.

Block Pecos Trust Co.'s No. 1 Hamilton, C Sec. 6, Georgetown Ry. Sur. ..... Shut down 3,150 ft.

Miller Bros.' No. 1 Allison & Burke, C NW cor. Sec. 16, Blk. 176, T.&P. Sur. ..... Shut down 120 ft.

Mid-Kansas Oil & Gas Co.'s No. 1 Goode, 2,152 ft. from E and 330 ft. from S Sec. 26, Blk. 161, G.C.&S.F. Sur. Shut down 6,120 ft.

Jones et al's No. 1 Pankenham, C SE NW Sec. 43, Blk. B-2, C.C.S.D.&R.G.N.G. Sur. ..... Shut down 2,545 ft.

Giles et al's No. 1 Phelps, 2,157 ft. from N and 2,482 ft. from W Sec. 5, G. W. Turley Sur. ..... Location.

TOM GREEN COUNTY

Welding & Dutton's No. 1 Norsworthy, 1,640 ft. from S and 587 ft. from E of John McNeese Sur. ..... Shut down 760 ft.; show oil and gas 725 ft.

Wintex Oil Co.'s No. 1 Campbell Est., 446 ft. from S and 630 ft. from W of Sec. 180, Dist. No. 11, S.P. Sur. .. Shut down 1,994 ft.

Pratt & Hancock's No. 2 Lewis, 100 ft. N and 330 ft. E of most northerly SW cor. of Joshua S. Grant Sur. No. 2 ..... Shut down 200 ft.

UPTON COUNTY

Farley et al's No. 1 Lane, 2,310 ft. from S and 990 ft. from W Sec. 36, Blk. 1, M.-K-T. Sur. ..... Drlg. 520 ft.

P. Coal & Oil Co.'s No. 2 Shirk, 1,650 ft. from S and 330 ft. from E of Sec. 1, Blk. 2, M.-K.-T. Sur. ..... Location.

VAL VERDE COUNTY

Independent Operators' No. 1 Whitehead, SE SE Sec. 10, Blk. 4, I.&G.N. Sur., elev. 1,175 ft. ..... Shut down 5,360 ft.

O. Owens' No. 1 Mills, Sec. 128, Blk. 1, I.&G.N. Sur., elev. 2,130 ft. ..... Shut down 6,780 ft.

WARD COUNTY

Boogher's No. 1 fee, 235 ft. from SE and 3,553 ft. from NE Sec. 11, Blk. 5, H.&T.C. Sur. ..... Shut down 2,111 ft.

Bradford-Bentley's No. 1 Beatty, 330 ft. from SW and NW of Sec. 3, Blk. 34, H.&T.C. Sur. ..... Rigging up.

Central Oil & Gas Co.'s No. 1 Barrow, 330 ft. from NW and 1,263 ft. from SW Sec. 55, J. W. Jackson Sur. ..... Top pay 2,409 ft.; total depth 2,448 ft.; 40 bbls. per day.

H. V. Greer's No. 1 Carr, 150 ft. from NW and 510 ft. from SW Sec. 12, Blk. 5, H.&T.C. Sur. ..... Spudded and shut down.

Hankinson et al's No. 1 Emery, 3,090 ft. from SE and 510 ft. from SW Sec. 26, Blk. 5, H.&T.C. Sur. ..... Shut down 2,238 ft.

Moran & Miles' No. 1 Boogher, 3,603 ft. from NE and 1,303 ft. from SE Sec. 11, Blk. 5, H.&T.C. Sur. ..... Shut down 715 ft.

R. F. Owen's No. 1 Lee, 1,344 ft. from NW and 4,533 ft. from SW Sec. 1, J. Howe Sur. ..... Shut down 175 ft.

Prairie Oil & Gas Co.'s No. 1 Edmonson, 330 ft. from NW and 2,310 ft. from SW of Sec. 23, Blk. 5, H.& T.C. Sur. ..... Drlg. 1,415 ft.

Prairie Oil & Gas Co.'s No. 2 Edmonson, 330 ft. from NW and SW of Sec. 23, Blk. 5, H.&T.C. Sur. ..... Location.

Rector Oil Co.'s No. 1 Smith, 1,320 ft. from N and E, Sec. 22, Blk. A, G.M.M.B.&A. Sur. ..... Shut down 3,602 ft.

Rexford et al's No. 2 Johnson, 2,300 ft. from SE and 4,450 ft. from NE Sec. 11, Blk. 5, H.&T.C. Sur. ..... Total depth 2,204 ft.; hole full oil; running tubing.

Paul Ryan et al's No. 1 J. S. Reynolds, 4,110 ft. from NE line and 150 ft. from NW line, Sec. 12, Blk. 5, H.&T.C. Sur. ..... Shut down 2,040 ft.

Sudderth & Carey's No. 1 J. H. Boogher et al, 150 ft. from SW and SE lines of Lot 24, Sec. 11, Blk. 5, H.&T.C. Sur. ..... Rigging up.

Stanolind Oil & Gas Co.'s No. 1 Brown, 330 ft. from NW and SW Sec. 26, Blk. B-29 ..... Shut down 2,163 ft.

Shipley et al's No. 1 Monroe, 330 ft. SE SW Sec. 3, Blk. 1 ..... Shut down 4,545 ft.

White et al's No. 1 Burtner, 150 ft. from NE and 515 ft. from SE of Sec. 8, Blk. 32, H.&T.C. Sur. ..... Shut down 755 ft.

WINKLER COUNTY

Liner Drlg. Co.'s No. 1 Campbell, 350 ft. from N and E cor. Sec. 2, Blk. B-5 ..... Shut down 4,640 ft.

Richardson's No. 1 Sealy, 330 ft. from S and W of Sec. 92, Blk. A, G.M.M.B&A. Sur. ..... Location.

WILDCAT OPERATIONS IN TEXAS PANHANDLE

(Continued from Page 28)

Magnolia Pet. Co.'s No. 1 Arnold, 330 ft. from S and E Sec. 149, Blk. 3, I.&G.N. Sur. ..... Location.

Magnolia Pet. Co.'s No. 1 Heaston, NE cor. S½ NE, Sec. 164, Blk. 3, I.&G.N. Sur. ..... Drlg. 1,405 ft.

Nelson et al's No. 1 Crews, 330 ft. S and E, NW, Sec. 12, Blk. 25, H.&G.N. Sur. ..... S.D. 2,619 ft.

Nipper et al's No. 1 Morse, 330 ft. from N and E, Sec. 1, Blk. 26, I.&G.N. Sur. ..... S.D. 1,360 ft.

Prairie Oil & Gas Co.'s No. 1 Morse, 330 ft. from N and E of Sec. 4, Blk. 26, H.&G.N. Sur. ..... Location.

Pulse-Shell Pet. Corp.'s No. 1 Wright, 330 ft. from S and W of Sec. 13, Blk. 3, I.&G.N. Sur. ..... Drlg. 1,740 ft.

Skelly Oil Co.'s No. 2 Heaston, 330 ft. from S and E N half NE, Sec. 164, Blk. 3, I.&G.N. Sur. ..... Spudded.

Saunders et al's No. 2 Sullivan, 822 ft. from W and 231 ft. from NE, 160 ft. S, 264 ac. of N½, Sec. 136, Blk. 3, I.&G.N. Sur. ..... Will plug back to 3,275 ft. and shoot.

Sullivan & Ochiltree's No. 1-A Morse, 330 ft. S and W, N½ NE, Sec. 15, Blk. A-9 H.&G.N. Sur. ..... Rig up and S.D.

Tarber's No. 1 Saunders, 330 ft. N and W, Sec. 3, Blk. 1, B.B.&S.F. Sur. ..... Location.

Quicksand Oil Co.'s No. 1 Chapman, 350 ft. from N and E, Sec. 69, Blk. 25, H.&G.N. Sur. ..... Rigging up.

Vulcan Corp.'s No. 1 Carpenter, 330 ft. from S and E, Sec. 25, Blk. 25, H.&G.N. Sur. ..... Drlg. 1,125 ft.

HUTCHINSON COUNTY

Danciger O. & R. Co.'s No. 1 Johnson, 330 ft. N and W, SE, Sec. 34, Blk. Y, A.&B. Sur. ..... Spudded and S.D.

Deal O. & G. Co.'s No. 2 Sanford, 330 ft. N and E of N 80 ac., S 160 ac., Sec. 81, Blk. 46, H.&T.C. Sur. .. S.D. 450 ft.

Huber Prod. Co.'s No. 1 Johnson Bros. (Premier), 330 ft. N and E of W 60 ac., N 80 ac., NW, Sec. 3, Blk. Y, A.&B. Sur. ..... S.D. 3,016 ft.

Smith & Daniels' No. 3 Pitcher, 990 ft. from S and 330 ft. from E, Sec. 19, Blk. M-21, T.C.R.R. Sur. ..... Drlg. 2,985 ft.

Skelly Oil Co.'s No. 1 Johnson Bros., 660 ft. S and W, SE, Sec. 30, Blk. Y, A.&B. Sur. ..... S.D. 3,115 ft.

Timms-Deatch's No. 4 Moore, 330 ft. N and W, Sec. 124, Blk. 4, I.&G.N. Sur. ..... Rig.

LIPSCOMB COUNTY

Okla. Public Service Co.'s No. 1 C. W. Jones, NE SW, Sec. 100, H.&T.C. Sur. ..... T.D. 5,003 ft.

LUBBOCK COUNTY

Center Oil Co.'s No. 1 Bowles Ranch ..... Small S.O. 1,133-40 ft.; S.D. 4,167 ft.

MOORE COUNTY

Gulf Prod. Co.'s No. 1 Burnett, 330 ft. from N and W, Sec. 356, Blk. 44, H.&T.C. Sur. ..... Drlg. 2,110 ft.

Interstate's No. 1 Nield, C NE, Sec. 18, Blk. 44, H.&T. C. Sur. ..... Location.

Pollard et al's No. 1 Hall, 330 ft. S and E, NE, Sec. 131, Blk. 3-T, T.&N.O. Sur. ..... Rig on ground.

Sunray Oil Co.'s No. 2 Jones, 330 ft. N and W, W½ SW, Sec. 164, Blk. 3-T, T.&N.O. Sur. ..... Rig on ground.

Texas Interstate P. L. Co.'s No. 1-23 Thompson, C N½ NE, Sec. 23, Blk. 44, H.&T.C. Sur. ..... Location.

Texas Interstate P. L. Co.'s No. 1-37 Sneed, C NW, Sec. 37, Blk. 6-T, T.&N.O. Sur. ..... Location.

Texas Interstate P. L. Co.'s No. 1 Coon, 2,025 ft. from N and 2,640 ft. from W, Sec. 149, Blk. 44, H.&T.C. Sur. ..... Drlg. 2,525 ft.

Texhoma Nat. Gas Co.'s No. 1 Coon-Sneed, center Sec. 8, Blk. 6-T, T.&N.O. Sur. ..... Drlg. 2,410 ft.

MOTLEY COUNTY

Matador Oil Corp.'s No. 1 Owens, C NE, Sec. 16, Blk. G, B.&B. Sur. ..... S.D. 530 ft.

OLDHAM COUNTY

Amalgamated German-American Oil Corp.'s No. 1 Norton, 330 ft. S and E, Sec. 12, T.&N.O. Sur. ..... S.D. 400 ft.

Chambers et al's No. 1 Herring, CNL, Sec. 20, Blk. 8, G.C.&S.F. Sur. ..... S.D. 2,945 ft.

PARMER COUNTY

Magnolia Pet. Co.'s No. 1 Wilson, 330 ft. from N and W of SE, Sec. 73, H. Kelly Sur. ..... Rigged up.

ROBERTS COUNTY

Chicken Creek Oil Co.'s No. 1 Ledrick, 330 ft. N and W, Sec. 55, Blk. C, G.&M. Sur. ..... Fishing 1,450 ft.

Travis et al's No. 1 Cunningham, 330 ft. S and W, Sec. 74, Blk. M-2, H.&G.N. Sur. ..... S.D. 2,690 ft.

WHEELER COUNTY

Clarity et al's No. 1 Porter, 330 ft. S and W, SE, Sec. 2, Blk. A-9, H.&G.N. Sur. ..... S.D. for 6-in. csg. at 3,150 ft.

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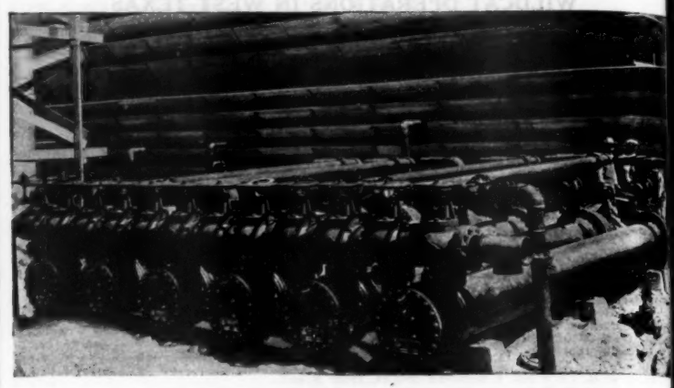

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The illustration shows six G-R Residuum-to-crude Exchangers with G-R Three-way Valves which were urgently required and quickly supplied to handle flush production in a Mid-Continent skimming plant. The cooling tower in the background is equipped with G-R Bentube Sections which were shipped from stock.

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Brief Items for Petroleum Refiners

Texas Marketers Urge Additional Statistical Data

By B. D. Stevenson

SAN ANTONIO, Tex., Oct. 24.—Two hundreds members of the Texas Petroleum Marketers Association at their annual meeting in San Antonio here Thursday and Friday were told by two different speakers that there should be more and better statistical information available to the industry and that the Department of Commerce was the agency to furnish the information.

It was suggested first by W. C. Gaylor, the president, in his annual address and again by E. L. Tutt, district manager of the Department of Commerce at Houston. A discussion of the bootleg gasoline business, re-election of all the old officers, an afternoon given to the code of ethics along with a luncheon at noon the first day and a stag dinner the last thing the second day rounded out the meeting.

W. C. Gaylor spoke at length on over production and said the law of supply and demand could not be violated without paying a heavy penalty but that it was being violated largely because the industry did not have the necessary information to govern its actions. He pointed out that an association could not gather and distribute the information but that the Department of Commerce could.

He urged that the industry contribute to the support of the chemical departments of the state universities and urged drastic action against gasoline bootleggers.

E. L. Tutt of the department of commerce, went at length into the need for more and better information in the line of statistics and conditions that would aid the business man and pointed out that the Department of Commerce could do this with the aid of the industry. He urged also that an exhaustive survey should be made of the whole marketing end of the industry.

George H. Sheppard, State Comptrol-

(Continued on Page 102)

NEW REFINERY OPERATING

CHATHAM, Ontario, Oct. 24.—The new refinery of the British American Oil Co. at Montreal is now in full operation, handling crude oil brought by the company's own tankers from its producing wells in East Texas. At last reports the company owned outright 14 producing wells and had an interest in six others in East Texas.

Production is delivered by pipe line to tankers at Port Arthur, Tex. The Montreal refinery markets its output in Quebec and other sections of eastern Canada. Some seven tankers are transporting crude from East Texas to Montreal, and two new tankers take crude from Montreal to the Toronto refinery. The company has three properties aggregating seven producing wells in the Oklahoma fields, with prorated production of close to 10,000 bbls. a day.

W. M. PAUL SUPERINTENDENT

FOR WORTH, Tex., Oct. 24.—W. M. Paul, formerly night superintendent of the Cosden Oil Co.'s refinery at Big Spring is now superintendent of the newly reorganized Howard County Refining Co.'s 2,000-bbl. plant at the same place. This plant was formerly owned by the Big Spring Refining Co. The Howard County Refining Co. was incorporated by Mrs. Dora Roberts, Robert T. Piner and Joseph Edwards. Mr. Edwards is general manager of the company, also being president and manager of the Big Spring Pipe Line Co., which will run oil through its line to the plant from the Howard-Glassock Pools.

IMMEDIATE EFFECT OF I.C.C. RATE DECISION NOT HARMFUL

WASHINGTON, D. C., Oct. 26.—The immediate effect of the decision of the Interstate Commerce Commission on the application of the steam railroads for a uniform 15 per cent increase in freight rates is entirely satisfactory to local authorities on oil traffic.

Willis Crane, traffic attorney of the National Petroleum Association with headquarters in this city, represented the association in opposition to the claims of the railroads. Mr. Crane summarizes the immediate effect of the outstanding features of the commission's decision upon the petroleum industry as follows:

1. The application for an increase of 15 per cent in all freight rates and charges is denied.

2. Temporary specific increases, ranging from $3 and $6 per car to 2 cents per 100 pounds, are suggested on specific commodities to expire March 31, 1933.

(a) A temporary increase of $6 per car is suggested on crude oil and asphalt.

(b) Gasoline, lubricating oils and other petroleum products are included among the commodities as to which a temporary increase of 1 cent per 100 pounds is suggested, but this is subject to the proviso that:

"In the case of rates on petroleum products * * * covered by the orders in No. 17,000, Parts 4, 4-A, * * * they shall not, on and after the dates when the rates covered by such respective orders become effective, exceed the maximum rates therein prescribed."

(c) A temporary increase of 10 per cent is suggested for all switching charges, except in the Chicago switching district, that situation being covered by Docket No. 19,610.

(d) The specific increases suggested are conditioned upon the submission by the carriers, on or before December 1, 1931, for the approval of the commission, of a "plan for the marshalling of the fund derived from the increase authorized, and for the distribution of that fund in the first instance among the carriers who fail to earn their interest charges, in proportion to their deficiencies."

Under the outstanding orders of the commission, it is expected that the rates prescribed in the General Oil Rate Cases

(Continued on Page 102)

INSTALLING LARGEST VESSEL AT MID-CONTINENT'S TULSA REFINERY

What is said to be the largest pressure vessel ever built for use in the petroleum industry was delivered last week at the West Tulsa, Okla., refinery of the Mid-Continent Petroleum Corp. The vessel, together with a large bubble tower which accompanied it, are being installed as part of the high-pressure equipment at the Mid-Continent refinery and will be in operation in about six weeks. The equipment replaces that of smaller capacity recently taken out of service at the refinery.

Due to the size and weight of the pressure vessel and tower the two units were brought to West Tulsa from the A. O. Smith Corp. plant at Milwaukee, Wis., by special train. Two specially designed flat cars with double trucks were required for the pressure vessel. The train traveled only in the daytime at an approximate speed of 20 miles per hour. The tower was separated from the vessel by several cars so that the railroad bridges would not be compelled to withstand the weight of both units at the same time.

The weight of the pressure vessel is 403,840 pounds or in excess of 200 tons and the tower 253,200 pounds or approximately 125 tons. The inside diameter of the pressure vessel is 10 feet and the over-all length 67 feet 7¼ inches. The wall thickness varies from a minimum of 3½ inches to 7½ inches. The vessel which is capable of withstanding a pressure of several hundred pounds has a special lining to prevent corrosion.

The bubble tower which was also built for high-pressure operation has a wall thickness of 2¾ inches. The tower is 72 feet 2 inches high with an inside diameter of 8 feet.

All the equipment was built by the A. O. Smith Corp. to meet the special requirements of the Mid-Continent refinery.

Specially designed pressure vessel and bubble tower at West Tulsa refinery of the Mid-Continent Petroleum Corp.

EMPLOYES AT BAYONNE THREATEN TO STRIKE

NEW YORK, Oct. 24.—Refinery curtailment in the Bayonne area has aroused considerable resentment in labor circles, and employes of the Bayonne plant of Tide Water Oil Co. have decided to resist a plan of the company to put into effect a 40-hour week November 1, unless the company pays them, in the aggregate, the same weekly wage they are now receiving for 44 hours of work and others for 48 hours.

In a recent announcement the company stated: "The company has decided to go on a 40-hour week, effective as of November 1, in order to obviate the necessity of dropping 125 men from the pay roll. This action was found necessary because of decreased crude runs, and consequent shutting down of certain processing units, the termination of the vacation period on October 31 and the completion within the near future of a major part of our construction work."

The plant force, approximating 1,350 men, has threatened a strike if the company puts either plan into effect November 1.

Thus far, there have been no indications of possible labor disturbances at other Bayonne refineries. Standard Oil Co. of New Jersey, in an announcement on its labor policy issued this week, points out that it has been following the suggestions of the president's committee on unemployment, which embody the same plan which the Tide Water refinery force has decided to resist. "For some months," says the statement, "the Standard Oil Co. of New Jersey has been operating on this basis. It has kept as many efficient employes as possible on the rolls by distributing available work, this resulting in working periods varying from 50 to 100 per cent of normal. This does not interfere with efficiency, and it has enabled the company to employ a much larger total force than would otherwise have been the case. It is gratifying that the division of work has met with cheerful acceptance among employes who have had to give up part of their time to provide jobs for others. To the extent that the plan can be adopted at industrial centers it will lessen the number of workers who would otherwise be without income and in many cases dependent upon organized agencies of relief. For that reason it merits sympathetic consideration by large employers of labor."

INSTALL ADDITIONAL CRACKING

Distillazione Italiana Combustibili, S. A. of Venice, Italy, has ordered the installation of a second Dubbs cracking unit at its refinery at Porto Marghera. The company's first Dubbs unit has been in operation for some time.

The new unit is of the latest design and is to be erected immediately. It is expected to be in operation early next year. The cracked distillate from the new unit will be rerun in a pipe still installed by Arthur G. McKee & Co.

R. E. WOOD RETIRES

R. E. Wood who has been superintendent of the No. 3 plant of the Casper, Wyo., refinery of the Standard Oil Co. of Indiana for several years has been granted an annuity by the company and has retired from active service. Mr. Wood has spent a lifetime in refinery construction and operation. He joined the Midwest Refining Co. organization in 1920 as master mechanic when the company was operating the Casper refinery. In 1921, he was made assistant superintendent and later superintendent of No. 3 plant. He will continue to reside in Casper.

Manufacture of Natural Gasoline

R. W. GARMAN ENGAGES IN PRIVATE PRACTICE

R. W. Garman has resigned as manager of the natural gasoline and gas operations of the Union Oil Co. in order to engage in private practice as a gas con-

R. W. Garman

sulting engineer. Mr. Garman has been active in association work in California and served as president of the California Natural Gasoline Association.

Mr. Garman joined the Union organization in 1919, having previously graduated from Purdue University and served as a second lieutenant in the army. Starting to work as a roustabout laying gas lines, he held various positions with the company. He was appointed gas superintendent of the southern division during the flush production period of several fields in Southern California. He was made manager of natural gasoline plants and gas operations in 1926 and continued in that position until his resignation.

SIGNAL HILL GASOLINE SHUTS DOWN 5 PLANTS

Consistent with the general trend in all areas toward operating those units which pay and temporarily shutting down those which through low market prices or curtailed gas production do not pay, the Signal Hill Gasoline Co., a subsidiary of the Richfield Oil Co., has shut down 5 of its 12 plants this year. These plants are all located in California most of them being in Los Angeles County.

The operating capacity of the plants at present is 97,000 gallons daily while 87,000 gallons capacity will be idle by November 1. On that date the 30,000-gallon plant known as No. 5 Naples will close down, its location being at Knob of Naples, Long Beach, in Los Angeles County. The complete list of operating and shutdown plants at present appears in tabular form below:

Name of plant	Capacity	Status:
Signal No. 4	35,000	Operating
Naples No. 5	30,000	To be S.D. Nov. 1, 1931
Torrance No. 6	2,000	S.D. Dec. 31, 1930
Denni No. 7	15,000	Shut down
Hass No. 8	11,000	Operated as a booster plant
Meader No. 9	35,000	Operating
Crampton No. 10	5,000	Operating
Maricopa No. 11	3,000	S.D. Sept. 1, 1931
Hobson No. 12	6,000	Operating
Huntington No. 13	5,000	Operating
Seal Beach No. 14	35,000	S.D. March 31, 1931
M & T No. 15	2,000	S.D. Aug. 5, 1931

GOVERNMENT GIVES PRELIMINARY DATA ON PYROLYSIS OF METHANE

By H. M. Smith, Peter Grandone and H. T. Rall
Bureau of Mines*

Figure 2 is a diagram of the apparatus used in studying the pyrolysis of both pure methane and mixtures of methane with other gases. In all runs, the gas, under pressure in cylinder A, is released through a reducing valve and a stopcock, 1, into the glycerin-sealed gasometer B. This gasometer has a capacity of approximately 2 cubic feet and is calibrated to read in hundredths of a cubic foot; its working pressure is shown by manometer E-1. During a run in which more than 2 cubic feet of gas are processed it is necessary to refill the inlet gasometer accordingly. This is done without disturbing the run, and the amount of gas used during the period of the refill is calculated from the flow rate and the time required to recharge the gasometer. The gas leaves the gasometer through the needle valve 2, passes through a U-tube filled with absorbents to remove traces of carbon dioxide and moisture, and then through stopcock 3 into the reaction tube. Manometer E-2 indicates the pressure at which the gas enters the reaction tube. The furnace D is electrically heated by a platinum resistance coil, and the current regulated by a rheostat. A platinum platinum-rhodium thermocouple, L, is fastened to the outside of the reaction tube, and is so placed, that it is in the center of the heated zone when the tube is in position in the furnace. The thermocouple lead wires pass through a cold junction box at 0° C. and into a potentiometer which indicates the millivoltage developed. The sillimanite reaction tube N has an outside diameter of 8.5 millimeters, an inside diameter of 6.7 millimeters and a length of 61 centimeters. This tube is connected at its exit end to a small Cottrell-type precipitator, E, by means of a metal stuffing box connection, M. The Cottrell-type precipitator is a U-shaped glass tube, each limb of which has an axial wire connected in parallel to one terminal of a high-voltage transformer.

The tube is immersed up to its side arms in a jar of water connected to the second terminal of the transformer. This apparatus precipitates the tars very effectively; and if the temperature is kept at 30 to 40° C., the liquid tars run to the bottom of the precipitator. This prevents any short circuits. Some naphthalene is vaporized at this temperature and may collect in the cooler connections leading to bottle G, but stoppage is prevented by warming these connections with an electric lamp. Absorber bottle G traps naphthalene vapors in tetrahydronaphthalene at room temperature, and thus prevents stoppage of the absorber bottles H, which also contain tetrahydronaphthalene. These absorber bottles which are packed in ice are equipped with fritted glass discs through which the gas passes. A tube, I, filled with glass wool and packed in ice and salt, condenses any of the solvent that vaporizes, as well as any residual light oil that escapes absorption. The gases are pulled through the absorber bottles by the glycerin-sealed transfer pump J and delivered into the gasometer K. The velocity of the gas through the tubes can be regulated easily and the desired pressure maintained by proper manipulation of the needle valves 2 and 4, controlling respectively the gas inlet at the gasometer and the gas exit through the pump. Manometer E-3 indicates the reduced pressure necessary to overcome the total resistance to the gas flow through the absorption train. The gasometer K, which also is sealed with glycerin, has a capacity of 11 cubic feet and can be read to one-hundredth of a cubic foot. The pressure in the gasometer is indicated by manometer E-4.

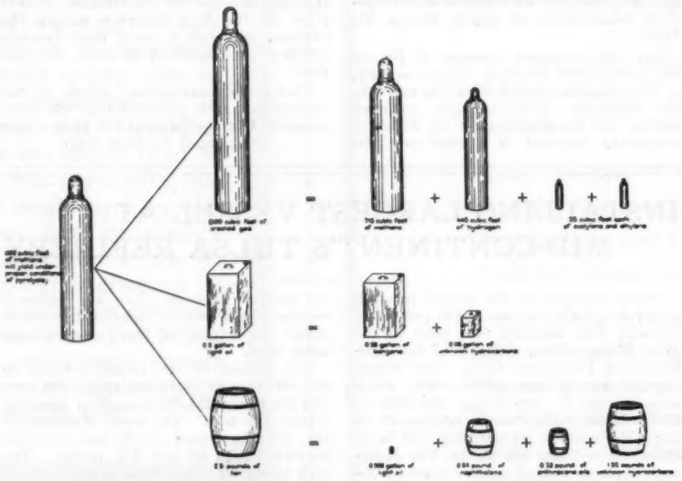

Figure 1—Chart of products obtained by pyrolysis of methane.

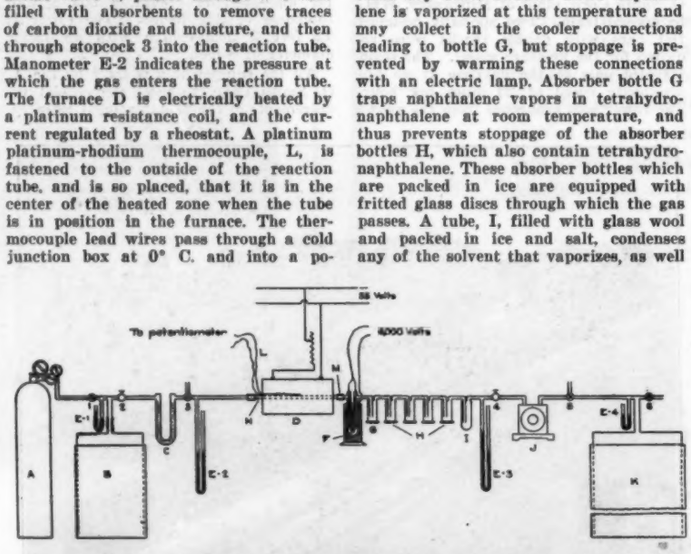

Figure 2—Diagram of apparatus used for pyrolysis of methane. A—gas cylinder; B—inlet gasometer; C—absorption tube for water and carbon dioxide; D—furnace; E—manometers 1, 2, 3, 4; F—tar precipitator; G—absorption bottle, room temperature; H—absorption bottles, 0° C.; I—vapor trap, in ice and salt; J—transfer pump; K—exit gasometer; L—thermocouple; M—metal stuffing-box connection; N—Sillimanite reaction tube; needle valves 2, 4; stopcocks 1, 3, 5, 6.

Procedure

The reaction tube is heated and all combustible material burned out with a stream of air and oxygen before a run is made. The furnace is then brought to the desired temperature. Each of the absorption bottles and the tar precipitator are weighed carefully before being connected. The system then is purged of air by a stream of nitrogen admitted at stopcock 3. When the temperature has become constant the gas is admitted to the system by turning stopcock 3 and the rate is carefully regulated. Readings on the inlet gasometer are taken every few minutes to keep the velocity under constant supervision. The gas is allowed to flow through the entire apparatus to stopcock 5, where it is diverted to the atmosphere until the presence of cracked gas (acetylene) can be detected by odor. The flow is then turned into the exit gasometer. The amount of gas allowed to escape is determined by the amount released from the inlet gasometer during the short period that the gas is diverted to the atmosphere. The run is continued under the desired conditions until approximately 10 cubic feet of exit gas have been collected, or until the reaction tube becomes clogged with carbon, which is indicated by a rapid decrease in pressure on manometer E-3, and a simultaneous pressure rise on E-2. In either case, the exit gasometer is then closed and nitrogen is passed through the system into the atmosphere; heating is topped; gasometers are read; and the atmospheric pressure and temperature are determined. The absorption bottles, vapor trap, and precipitator are then removed and

(Continued on Page 101)

START TRIAL TESTING GAS CONSERVATION ACT

AUSTIN, Tex., Oct. 27.—A test suit on the new oil and gas conservation law, dealing with discharge of dry gas into the air after it has been stripped of casinghead gasoline, was ordered to trial Tuesday morning before District Judge Charles A. Wheeler.

It is the litigation between T. M. Deal Oil & Gas Co. and the Railroad Commission. The case was permitted to go to trial only after a federal court injunction restraining the Railroad Commission from interfering with F. C. Henderson, Inc., operator of casinghead gasoline plants in Hutchinson County, and with the T. M. Deal and other companies supplying the Henderson plant with wet gas, had been modified.

Federal court orders in the case were entered by Judge Duval West of San Antonio and a federal judge in the Amarillo district.

The suit was brought by the Deal company to test whether or not the Railroad Commission can enforce its statute governing waste as applied to wells producing gas, so as to prevent dissipation of gas after the casinghead gasoline content has been removed. Trial will require several days, attorneys said.

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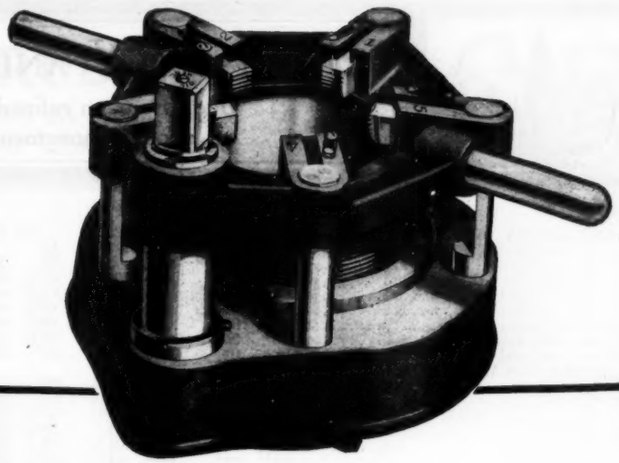

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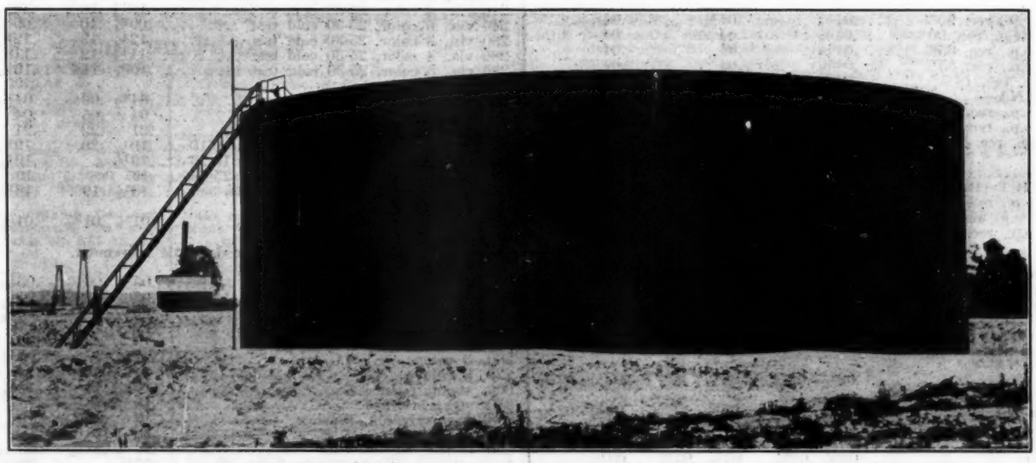

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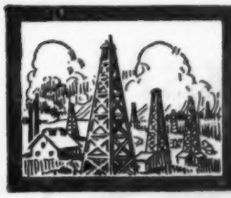


REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement unless otherwise noted.

GASOLINE AND NAPHTHA

OKLAHOMA (Group 3)—	Oct. 27		Oct. 20		Oct. 13	
50-52 450 endpoint	.03½	.03¾	.03¼	.03½	.03	
56-58 450 endpoint	.03¾	.04	.03⅝	.03½	.03	.03¼
58-60 437 endpoint (U. S. Motor)	.04	.04½	.03⅝	.04	.03⅜	.03⅝
60-62 437 endpoint	.04	.04½	.03⅝	.04	.03⅝	.03⅝
60-62 400 endpoint	.04¼	.04⅝	.04	.04¼	.03⅝	.03¾
64-66 375 endpoint	.04⅝	.04¾	.04½	.04⅝	.04¼	.04½
68-70 360 endpoint	.05	.05¼	.04⅝	.04¾	.04⅝	.04⅝
64-66 437 endpoint (blend)	.03¾	.04	.03½	.03⅝	.03	.03¼
NORTH TEXAS—						
50-52 450 endpoint	.03½	.03¾	.03¼	.03½	.03	
58-60 450 endpoint	.03⅝	.03¾	.03¼	.03½	.03	.03¼
58-60 437 endpoint (U. S. Motor)	.04	.04¼	.03½	.03⅝	.03¼	.03½
60-62 400 endpoint	.04	.04½	.03¾	.04	.03½	.03⅝
64-66 390 endpoint	.04½	.04⅝	.04	.04⅛	.04	.04⅛
64-66 375 endpoint	.04⅝	.04¾	.04⅜	.04⅝	.04¼	.04½
68-70 360 endpoint	.05	.05¼	.04⅝	.04¾	.04⅝	.04⅝
64-66 437 endpoint (blend)	.03¾	.04	.03¼	.03½	.03¼	
***NORTH LOUISIANA—**						
58-60 437 endpoint (U. S. Motor)	.04¼		.04		.03⅜	.03½
***ARKANSAS—**						
58-60 437 endpoint (U. S. Motor)	.04¼	.04⅜	.04		.03⅜	.03½
PENNSYLVANIA—						
52-54 Naphtha	.04½		.04¼		.04½	
54-56 Naphtha	.04¼	.04½	.04¼	.04½	.04½	.04¾
58-60 Gasoline	.04½	.04¾	.04½	.04¾	.04¾	
60 Gasoline	.04¾	.05	.04¾	.05	.04¾	.05
62 Gasoline	.05	.05¼	.05	.05¼	.05	
64 Gasoline	.05¼	.05¾	.05¼	.05¾	.05¼	.05½
68-70 350 endpoint gasoline	.05¾	.06	.06		.06	
CALIFORNIA—						
†54-58 437 endpoint (U. S. Motor) domestic	.05¾	.06¾	.05¾	.06¾	.05¾	.06¾
58-60 400 endpoint domestic gasoline	.06¼	.07¼	.06¼	.07¼	.06¼	.07¼
CHICAGO DISTRICT (Based on Group 3)—						
50-62 450 endpoint (Naphtha)	.03¾	.04	.03⅛	.03½	.03	.03⅛
58-60 437 endpoint (U. S. Motor)	.03⅝	.04¼	.03¾	.03⅝	.02¾	.03
60-62 400 endpoint	.04	.04½	.03½	.04	.03¼	.03½
64-66 375 endpoint	.04⅜	.04⅝	.04⅛	.04½	.04	.04¼
68-70 360 endpoint	.04⅜	.05	.04½	.04⅝	.04⅛	.04¼
64-66 437 endpoint (blend)	.03¾	.04	.03½	.03¾	.02¾	.03
GULF COAST (Export)—						
58-60 U. S. Motor	.03¾	.04	.03½	.04	.03½	.04
60-62 400 endpoint	.04¼		.04¼		.04¼	
61-63 390 endpoint	.04¼		.04¼		.04¼	
64-66 375 endpoint	.04½		.04½		.04½	

*Louisiana, Arkansas and Mississippi delivery. †For Pacific Coast consumption.

NATURAL GASOLINE

OKLAHOMA (Group 3)—	Oct. 27	Oct. 20	Oct. 13
Grade A, 72-79.9, 375 e.p., rec. 90%	.04¾	.04⅝	.04¼
Grade AA, 80-87.9, 375 e.p., rec. 90%	.04¾	.04¼	.04½
Grade B, 76-83.9, 375 e.p., rec. 85%	.04¾	.04¼	.04¼
Grade BB, 84-92, 375 e.p., rec. 85%	.04¾	.04¼	.04¼
Grade C, 80-92, 375 e.p., rec. 78%	.04¾	.04¼	.04¼
NORTH TEXAS—			
Grade A, 72-79.9, 375 e.p., rec. 90%	.04¾	.04¼	.04
Grade AA, 80-87.9, 375 e.p., rec. 90%	.04⅝	.04	.04
Grade B, 76-83.9, 375 e.p., rec. 85%	.04⅝	.04	.04
Grade BB, 84-92, 375 e.p., rec. 85%	.04⅝	.04	.04
Grade C, 80-92, 375 e.p., rec. 78%	.04⅝	.04	.04
NORTH LOUISIANA—			
Grade AA, 80-87, 375 e.p., rec. 90%	.04¾	.04¼	.04½
Grade BB, 84-92, 375 e.p., rec. 85%	.04¾	.04¼	.04⅜
Grade C, 80-92, 375 e.p., rec. 78%	.04¾	.04¼	.04⅛
CALIFORNIA—			
75-78 375-390 endpoint	.04¾ .05½	.04¾ .05½	.04½ .05½
CHICAGO DISTRICT (Based on Group 3)—			
Grade A, 72-79.9, 375 e.p., rec. 90%	.04¾	.04¼	.04¼
Grade AA, 80-87.9, 375 e.p., rec. 90%	.04¾	.04¼	.04¼
Grade BB, 84-92, 375 e.p., rec. 85%	.04¾	.04¼	.04¼

BURNING OIL

OKLAHOMA (Group 3)—	Oct. 27		Oct. 20		Oct. 13	
41-43 water white kerosene	.02	.02¼	.02	.02½	.01⅞	.02
42-44 water white kerosene	.02⅛	.02⅜	.02⅛	.02¼	.02⅛	.02¼
NORTH TEXAS—						
41-43 water white kerosene	.02⅛		.02	.02⅛	.01⅞	.02
40-41 water white kerosene	.02		.02		.01⅞	
***NORTH LOUISIANA—**						
41-43 water white	.02½	.02¾	.02½		.02¼	.02½
***ARKANSAS—**						
41-43 water white kerosene	.02½	.02¾	.02½		.02¼	.02½
PENNSYLVANIA—						
43 Kerosene prime white	.03½		.03½		.03⅜	
45 Kerosene water white	.03⅝	.03¾	.03⅝	.03¾	.03½	
46 Kerosene water white	.03⅞	.04	.03⅞	.04	.03⅞	
CALIFORNIA—						
38-40 water white Kero. (high burning test)	.04	.05	.04	.05	.04	.05
CHICAGO DISTRICT (Based on Group 3)—						
41-43 water white kerosene	.02	.02⅛	.02	.02⅛	.02	.02⅛
42-44 water white kerosene	.02⅛	.02⅜	.02⅛	.02⅜	.02⅛	.02⅜
GULF COAST (Export)—						
41-43 water white	.03¾		.03½		.03½	
44 prime white	.03½	.03¾	.03½	.03¾	.03½	.03¾

*Louisiana, Arkansas, Mississippi and East Texas delivery.

FUEL OIL

OKLAHOMA (Group 3)—	Oct. 27		Oct. 20		Oct. 13	
Below 18 gravity Fuel Oil, per bbl.	.25	.30	.25	.30	.25	.30
18-22 Fuel Oil, per bbl.	.30	.35	.27½	.35	.27½	.35
20-22 Fuel Oil, per bbl.	.32½	.37½	.30	.35	.27½	.35
22-26 Fuel Oil, per bbl.	.35	.40	.32½	.37½	.30	.37½
24-26 Fuel Oil, per bbl.	.40	.45	.37½	.42½	.35	.40
26-30 Fuel Oil, per bbl.	.47½	.50	.45	.50	.42½	.47½
28-30 Fuel Oil, per bbl.	.50	.55	.47½	.52½	.45	.50
32-36 Gas Oil (industrial)	.01⅜	.01½	.01⅜	.01½	.01¼	.01½
32-36 Gas Oil (straw color, high cold test)	.01⅜	.01½	.01⅜	.01½	.01¼	.01½
32-36 Gas Oil (straw color, low cold test)	.01⅝	.01¾	.01⅝	.01¾	.01¾	.01¼
36-38 Distillate	.01¾		.01⅝	.01¾	.01½	.01⅝
38-40 Straw Distillate	.01¾	.01⅞	.01⅝	.01¾	.01½	.01⅝

Note—Fuel oils over 40 cold test generally 5 to 10 cents per barrel less when available—

NORTH TEXAS—						
Below 20 gravity Fuel Oil, per bbl.	.35	.40	.30	.35	.25	.30
24-26 Fuel Oil, per bbl.	.40	.45	.35	.40	.30	.35
32-36 Gas Oil (industrial)	.01¼	.01⅜	.01¼	.01⅜	.01½	.01¼
38-40 Straw Distillate	.01⅝	.01¾	.01⅝	.01¾	.01½	.01⅝
***NORTH LOUISIANA—**						
18-20 Fuel Oil, per bbl.	.40	.50	.40	.50	.40	.50
30-32 Gas Oil (low cold test)	.01¾	.02	.01½	.01¾	.01½	.01¾
***ARKANSAS—**						
33-36 Distillate	.01¾	.02	.01¾	.02	.01¾	.02
30-32 Gas Oil	.01¾		.01½	.01¾	.01½	.01¾
16-22 Refinery Fuel Oil, per bbl.	.35	.50	.35	.50	.35	.50
GULF COAST (South Texas)—						
Gas Oil	.02¼	.02½	.02¼	.02½	.02¼	.02½
Bunker C Fuel (cargo lots), per bbl.	.40	.45	.40	.45	.40	.45
Bunker C Fuel (small lots)	.45		.45		.55	
PENNSYLVANIA—						
30-34 Fuel Oil	.02¾		.02¾		.02¾	.03
36-40 Gas Oil	.02¾	.03	.02¾	.03	.03	
CALIFORNIA—						
42-45 480 endpoint engine distillate	.06¾	.07¾	.06½	.07½	.06½	.07½
15-19 Fuel Oil, Bunker (at tidewater), bbl.	.60	.80	.60	.80	.60	.80
15-19 Fuel Oil, cargo lots (tidewater), bbls.	.55	.75	.55	.75	.55	.75
†15-19 Fuel Oil (f.o.b. tank cars), bbl.	.45	.75	.45	.75	.45	.75
27 plus Diesel, per bbl.	.80	.95	.80	.95	.80	.95
30-34 Gas Oil	.80	.95	.80	.95	.80	.95
CHICAGO DISTRICT (Based on Group 3)—						
18-22 Fuel Oil, per bbl.	.30	.35	.30	.35	.30	.35
22-26 Fuel Oil, per bbl.	.35	.40	.32½	.40	.32½	.40
28-30 Fuel Oil, per bbl. (zero)	.50	.55	.47½	.52½	.47½	.52½
32-36 Gas Oil (industrial)	.01½	.01⅝	.01½	.01⅝	.01½	
32-36 Gas Oil (zero)	.01⅝	.01⅞	.01⅝	.01⅞	.01⅝	
38-40 Straw Distillate	.01¾	.02	.01¾	.02	.01¾	

*Louisiana, Arkansas, Mississippi and East Texas delivery. †Lowest priced fuel oil has high sulphur content.

LUBRICATING OIL AND WAX

OKLAHOMA (Group 3)—	Oct. 27		Oct. 20		Oct. 13	
100 vis., 2 color, 20-25 cold test	.04½	.04¾	.04½	.04¾	.04½	.04¾
100 vis., 3 color, 20-25 cold test	.04	.04½	.04	.04½	.04	.04½
150 vis., 3 color, 20-25 cold test	.06¾	.07¼	.06¾	.07¼	.06¾	.07¼
150 vis., 4 color, 20-25 cold test	.06¼	.06½	.06¼	.06½	.06¼	.06½
180 vis., 3 color, 23-28 cold test	.08¼	.08¾	.08¼	.08¾	.08¼	.08¾
180 vis., 4 color, 23-28 cold test	.07¾	.08¼	.07¾	.08¼	.07¾	.08¼
180 vis., 5 color, 23-28 cold test	.07¼	.07½	.07¼	.07½	.07¼	.07½
200 vis., 3 color, 23-28 cold test	.09½	.10	.09½	.10	.09½	.10
200 vis., 4 color, 23-28 cold test	.09	.09½	.09	.09½	.09	.09½
200 vis., 5 color, 23-28 cold test	.08¼	.08½	.08¼	.08½	.08¼	.08½
240 vis., 3 color, 25-30 cold test	.11	.11¼	.11	.11¼	.11	.11¼
240 vis., 4 color, 25-30 cold test	.10½	.10¾	.10½	.10¾	.10½	.10¾
240 vis., 5 color, 25-30 cold test	.09¾	.10	.09¾	.10	.09¾	.10
280 vis., 3 color, 25-30 cold test	.12½	.13	.12½	.13	.12½	.13
280 vis., 4 color, 25-30 cold test	.11½	.12	.11½	.12	.11½	.12
280 vis., 5 color, 25-30 cold test	.10¾	.11	.10¾	.11	.10¾	.11
Cylinder Stocks:						
600, steam refined, light green	.04½	.06	.04½	.06	.04½	.06
600, steam refined, dark green	.04	.05	.04	.05	.04	.05
190-200 vis., D color, Bright Stocks	.21	.22	.21	.22	.21	.22
150-160 vis., D color, Bright Stocks 0-10 c.t.	.19½	.20	.19½	.20	.19½	.20
150-160 vis., D color, Bright Stocks 10-25 c.t.	.19½		.19½		.19½	
150-160 vis., D color, Bright Stocks 25-40 c.t.	.19		.19		.19	
150-160 vis., E color, Bright Stocks	.18½	.19	.18½	.19	.18½	.19
Waxes:						
124-126 White Crude Scale Wax	.01⅝	.01⅞	.01⅝	.01⅞	.01⅝	.01⅞

All bright stock prices are for domestic movement.

PENNSYLVANIA—						
34 Neutral	.05½	.06½	.05½	.06½	.05½	
34 Sundebloom	.05	.05½	.05	.05½	.05	.05½
36 Miners' Neutral	.05½		.05½		.05½	
150, 3 color	.17	.17½	.17	.17½	.17	.17½
180, 3 color	.19	.19½	.19	.19½	.18½	.19
200, 3 color	.21½		.21½		.21	.21½
220, 3 color	.24	.26½	.24	.26½	.22	.26½
600, steam refined	.14¼	.14½	.14¼	.15	.14	.14½
950, steam refined	.18	.18½	.18	.18½	.17½	.18
600, Pennsylvania Flash	.19	.20	.19	.20½	.18½	.19
600, E filtered	.18	.18½	.18	.19	.18	
600, D filtered, Oil City	.22	.23½	.23	.23½	.22½	.23½
Pennsylvania Bright Stocks below 35 c.t.	.27½		.28		.27	.27½
Pennsylvania Bright Stocks above 35 c.t.	.26½	.27	.26½	.27	.27	
*122-124 White Crude Scale Wax	.02		.02		.02	
*124-126 White Crude Scale Wax	.02		.02		.02	

*At New York.

GULF COAST (South Texas)—						
100 vis., 2-2½ color, pale oil	.05½	.05¾	.05½	.05¾	.05½	.05¾
200 vis., 3 color, pale oil	.07½	.07⅞	.07½	.07⅞	.07½	.07⅞
300 vis., 3 color, pale oil	.08¾	.08⅞	.08¾	.08⅞	.08¾	.08⅞
500 vis., 3½ color, pale oil	.09⅞	.10¼	.09⅞	.10⅜	.09⅞	.10⅜
750 vis., 3½ color, pale oil	.11⅝	.11⅞	.11⅝	.11⅞	.11⅝	.11⅞
1,200 vis., 3½ color, pale oil	.13⅞	.14⅜	.13⅞	.14⅜	.13⅞	.14⅜
2,000 vis., 4 color, pale oil	.14⅞	.15⅜	.14⅞	.15⅜	.14⅞	.15⅜
200 vis., 5-6 color, red oil	.06¾	.06⅞	.06¾	.06⅞	.06¾	.06⅞
300 vis., 5-6 color, red oil	.07⅞	.08⅜	.07⅞	.08⅜	.07⅞	.08⅜
500 vis., 5-6 color, red oil	.09½	.09⅝	.09½	.09⅝	.09½	.09⅝
1,200 vis., 5-6 color, red oil	.12⅞	.13⅜	.12⅞	.13⅜	.12⅞	.13⅜
2,000 vis., 6 plus color	.14⅞	.15⅜	.14⅞	.15⅜	.14⅞	.15⅜
CALIFORNIA—						
130 vis., 2½-3 color	.08¼	.08⅜	.08¼	.08⅜	.08¼	.08⅜
200 vis., 2½-3 color	.09¼	.10¼	.09¼	.10¼	.09¼	.10¼
300 vis., 3-3½ color	.10¼	.11¼	.10¼	.11¼	.10¼	.11¼

REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement unless otherwise noted.

350 vis., 31/2-4 color	.11¼	.12	.11¼	.12	.11¼	.12
450 vis., 31/2-4 color	.12	.12¾	.12	.12¾	.12	.12¾
550 vis., 31/2-4 color	.12¾	.13¼	.12¾	.13¼	.12¾	.13¼
Red Neutral:						
200 vis., 41/2-5 color	.09¾	.10¼	.09¾	.10¼	.09¾	.10¼
300 vis., 5-6 color	.10½	.11	.10½	.11	.10½	.11
500 vis., 41/2-5 color	.12¾	.13½	.12¾	.13½	.12¾	.13½
600 vis., 6½ plus color	.13½	.14½	.13½	.14½	.13½	.14½
700 vis., 6½ plus color	.14½	.15¼	.14½	.15¼	.14½	.15¼

Note—Bright stocks are not manufactured commercially on the Pacific Coast.

NEW YORK (BAYONNE) EXPORT PRICES

	Oct. 27		Oct. 20		Oct. 13	
Gasoline, U. S. Motor, 58-60, 437 e.p.	.05½	.06¼	.05¼	.06	.05¼	.06¼
Kerosene, water white, 41-43	.05		.05		.05	
*Fuel Oil, Bunker "C"	.60		.60		.70	
†Fuel Oil, Diesel, 28-30, per bbl.	1.30		1.30		1.40	
Gas Oil, 28 gravity plus	.04		.04		.04	
25 pale Paraffin Oil, tank car	.10¼		.10¼		.10¼	
28 pale Paraffin Oil, tank car	.07¼		.07¼		.07¼	
280 red Paraffin Oil, tank car	.12½		.12½		.12½	
250 red Paraffin Oil, tank car	.11½		.11½		.11½	
225 red Paraffin Oil, tank car	.10		.10		.10	
200 red Paraffin Oil, tank car	.09¼		.09¼		.09¼	
Domestic heating oil, min. 32 grav., tank car	.03½		.03½		.03½	
Refined Wax:						
120-122 a.m.p., per lb.	.02¾		.02¾		.02⅞	
125-127 a.m.p., per lb.	.02⅞		.02⅞		.03	
130-132 a.m.p., per lb.	.03⅜		.03⅜		.03½	
133-135 a.m.p., per lb.	.04		.04		.04	
135-137 a.m.p., per lb.	.04½		.04½		.04½	
Petrolatum in barrels in carload lots, per pound:						
Dark Green	.01¾		.01¾		.01¾	
Amber	.02½		.02½		.02½	
Extra Amber	.03		.03		.03	
Cream	.05½		.05½		.05½	
Lily White	.06½		.06½		.06½	
Snow White	.07		.07		.07	

*Lighterage 5 cents a barrel extra. †Lighterage 6.5 cents a barrel.

NEW YORK (BAYONNE) REFINERY PRICES

	Oct. 27		Oct. 20		Oct. 13	
600, steam refined cylinder stocks, in bbl.	.22	.22½	.22	.22½	.22	.22½
635 steam refined	.24	.24½	.23½	.24	.23½	.24
650, steam refined	.25½	.26	.25	.25½	.25	.25½
600, Pennsylvania Flash	.26½	.27	.26	.27	.26	.27
630, Pennsylvania Flash	.30½	.31	.30	.31	.30	.31
600, Warren E	.25½	.26	.25	.26	.25	.26
600, Oil City E	.24½	.25	.24	.25	.24	.25
Light 140-150 Bright Stocks	.35½	.36	.35	.36	.35	.36
Dark 140-150 Bright Stocks	.34½	.35	.34	.35	.34	.35

LOS ANGELES EXPORT PRICES

	Oct. 27		Oct. 20		Oct. 13	
Kerosene, water white	.04	.04¾	.04	.04¾	.04	.04¾
U. S. Motor gasoline, 53-55, 437 e.p.	.04¼	.04¾	.04¼	.05	.04¼	.05
58-60 400 endpoint gasoline	.04¾	.05¼	.04¾	.05½	.04¾	.05½

CRUDE OIL PRICES

OKLAHOMA, KANSAS, NORTH AND EAST CENTRAL TEXAS

East Texas† ..... $ .65
Corsicana heavy (Aug. 22, 1931)† ..... .34
Other fields.....See gravity table

†Posted by Panola Pipe Line Co. Aug. 17, 1931; by Magnolia Petroleum Co., Aug. 22, 1931; Tidal Refining Co., Sept. 2; Gulf Pipe Line Co., Sept. 3; Sinclair Refining Co., Sept. 3.

Note—Humble Oil & Refining Co. and Stanolind Crude Oil Purchasing Co. also pay 65 cents for East Texas oil, but do not post a price.

EASTERN STATES
Joseph Seep Purchasing Agency
(Effective September 12, 1931)

Pennsylvania Grade Oil in National Transit Lines (Bradford Field) (Oct. 15, 1931) $2.15
Pennsylvania Grade Oil in Southwest Pennsylvania Lines 1.80
Penna Grade Oil in Eureka Pipe Line Lines (West Virginia) 1.70
Penna Grade Oil in Buckeye Pipe Line Lines (Sept. 4, 1931) 1.60
Corning Grade Oil in Buckeye Pipe Line Co.'s Line (Sept. 16, 1931) ..... .80
Ragland Grade Oil in Cumberland Pipe Lines (Kentucky) (Jan. 10, 1931).... .60
Wayne district Oil in Cumberland Pipe Lines (April 23, 1931) 1.17

Tide Water Pipe Co.
(Effective October 15, 1931)

Bradford, Pa. $2.15
Allegany, N. Y. 2.15

Pure Oil Co.
(Effective September 12, 1931)

Cabin Creek, W. Va. $1.70
Bradford Hollow, W. Va. 1.70

Pennsoil Co.
(Effective October 8, 1931)

Pennsylvania Grade Oil in National Transit Lines:
Group A $2.05
Includes Cochran, Franklin, Hamilton and Doolittle districts.
Group B $2.04
Includes Titusville district.
Group C $2.03
Includes Turkey and Tidioute districts.
Group D $2.02
Includes Bear Creek and Porkey districts.
Group E $2.00
Includes Eldenau, Bull Creek, Rough Run, Carbon, Dipner, Bredin, McJunkin, Jameson, Kennerdell, Emlenton, Tiona, Lacy and Kinzua districts.
Price depends on length of pipe line haul to plant at Oil City.

TEXAS PANHANDLE
Gray County, Wheeler County and Carson-Hutchinson Counties.See gravity table

WEST TEXAS
Iatan and Westbrook..Same as North Texas
Crane, Upton, Crockett, Howard, Glasscock, Ector, Winkler and Pecos Counties* ..... $ .35
Lea County, N. Mex.* ..... .35
Toborg, Pecos County, Aug. 25, 1931†.. .25

*The Texas Company, August 22, 1931. All other companies, August 22. †Shell Petroleum Corp.

GULF COAST
Grade A and Grade B classifications discontinued by leading buyers .....
.....See gravity table
Jennings, La. (Aug. 22, 1931)* ..... $ .50
Lockport, La. (Aug. 27, 1931)† .....
.....See Gulf Coast gravity table
Refugio light.....See gravity table
Refugio heavy (Aug. 22, 1931)‡..... .60
Markham (Aug. 22, 1931)‖ ..... .52
.....See Gulf Coast gravity table
High Island (Aug. 22, 1931)‖..... .50

*Gulf Refining Co. †Vacuum Oil Co. ‡Humble Oil & Refining Co. §The Texas Company. Other companies July 24. ‖Gulf Pipe Line Co.

NORTH LOUISIANA AND ARKANSAS
Smackover, Ark. (all grades) See note below
Urbana, Ark. .....See note below
Bellevue, La. (June 3, 1931) ..... $ .25
Urania, La. (Aug. 24, 1931) ..... .40
Calion, Ark. (Aug. 22, 1931) ..... .52
East El Dorado, Ark. (Aug. 22, 1931).. .45
Stephens, Ark., below 29° (August 24, 1931) ..... .41
Stephens, Ark., 29° and above (August 24, 1931) ..... .44
Other fields.....(See gravity table)

Note—Smackover, all grades, The Texas Company, August 22, 1931, 52 cents; Gulf

(Continued on Page 94)

CRUDE OIL GRAVITY TABLE

	Okla., Kans., East Central and North Central Texas (1)	North Louisiana and Arkansas (2)	Gray County, Texas (3)	Carson and Hutchinson Counties, Tex. (4)	Salt Creek, Wyo. (5)	Gulf Coast (6)
Below 25 degrees	...	...	...	...	...	.55
25-25.9 degrees	...	...	...	...	...	.56
26-26.9 degrees	...	...	...	...	...	.57
27-27.9 degrees	...	...	...	...	...	.58
28-28.9 degrees	...	...	...	...	...	.59
Below 29 degrees	.46	.46	...	...	.46	...
29-29.9 degrees	.48	.48	...	...	.48	.60
30-30.9 degrees	.50	.50	...	...	.50	.61
31-31.9 degrees	.52	.52	...	...	.52	.62
32-32.9 degrees	.54	.54	...	...	.54	.63
33-33.9 degrees	.56	.56	...	...	.56	.64
34-34.9 degrees	.58	.58	.46	.41	.58	.65
35-35.9 degrees	.60	.60	.48	.43	.60	.66
36-36.9 degrees	.62	.62	.50	.45	.62	.67
37-37.9 degrees	.64	.64	.52	.47	.64	.68
38-38.9 degrees	.66	.66	.54	.49	.64	.69
39-3.99 degrees	.68	.68	.56	.51	.64	.70
40 degrees and above	.70	.70	.58	.53	.64	.71

Note—Magnolia Petroleum Co. does not pay on a gravity basis. The Magnolia company posted the following notices on August 22 and August 24 as indicated:

"Effective August 22, 1931, and until further notice our prices on crude oil will be as follows per barrel at the wells: Central Texas, which includes only Mexia, Wortham, Corsicana light, Panola County, and Lytton Springs, 64 cents; Panhandle district of Texas, Gray County, 58 cents; Carson and Hutchinson Counties, 51 cents; West Texas, being Crane, Upton, Howard, Glasscock and Mitchell Counties, 35 cents; Mirando, 60 cents; Darst Creek, 52 cents; Luling, 34 cents; Corsicana heavy, 34 cents. Oklahoma, including Cushing, Yale, Oklahoma City, Morrison, Wewoka and Seminole, 68 cents; Cement, Duncan, and Walters, 60 cents; Healdton, 37 cents; Hewitt and Graham, 52 cents. North and Central Texas, including only Burkburnett, Archer, Stephens, Henrietta, Electra, Comanche and Olden, 68 cents; East Texas, 65 cents. The White Eagle Oil Corp., effective September 28, posted the following prices in Kansas: Group 1—Eastborough, Wright, Robbins, Greenwich, Lorena and North Greenwood Pools, 70 cents; Group 2—Eastman, Fox-Bush and Keighly, 68 cents; Group 3—Smock, Sluss, Leon, Weaver, Peabody and Rock, 66 cents; Group 3A—Ritz-Canton, 64 cents; Group 4—Urschell, Florence, Elbing, Nuttle-Koogler, Augusta, 62 cents; Group 5—Gelwick, 46 cents.

Effective August 24, 1931, Magnolia Petroleum Co.'s prices on crude oil in the states of Louisiana and Arkansas will be as follows per barrel at the wells: Louisiana, Bull Bayou, 68 cents; Haynesville, 50 cents; Pine Island, 55 cents; Cotton Valley, 46 cents. Arkansas, El Dorado and Rainbow, 48 cents; El Dorado East Field and Smackover district, 45 cents.

Column 1—The Texas Company (excepting Kansas), August 22; Gypsy Oil Co., Gulf Pipe Line, Carter Oil Co., Humble Oil & Refining Co., Stanolind Crude Oil Purchasing Co., Sinclair Refining Co., Continental Oil Co., Skelly Oil Co. (Kansas), Empire Pipe Line Co., Wilcox Oil & Gas Co., Tidal Refining Co., Pure Oil Co., Vickers Petroleum Co., Derby Oil Co., all on August 22. Standish Oil Co., September 17, 1931.

Column 2—The Texas Company, August 22; Gulf Refining Co., August 22; Standard Oil Co. of Louisiana, August 24; Louisiana Oil Refining Co., August 24.

Column 3—The Texas Company, August 22; Gulf Pipe Line Co., August 22; Humble Oil & Refining Co., August 22; Wilcox Oil & Gas Co., September 17, 1931; Philtex Oil Co., September 17, 1931.

Column 4—The Texas Company, August 22; Gulf Pipe Line Co., August 22; Humble Oil & Refining Co., August 22; Philtex Oil Co., September 17, 1931.

Column 5—The Mid West Refining Co., August 22.

Column 6—The Texas Company, August 22; Humble Oil & Refining Co. and Gulf Pipe Line Co. on August 22 but their price schedule stops at 35 and above at 66 cents. Sun Oil Co. and Sinclair Refining Co. met Humble-Gulf prices effective August 22, but Sun posted a price of 55 cents for Grade A oil, it being the only company that maintains A and B grade classifications. The Vacuum Oil Co. applied the schedule to Lockport on August 27.

CALIFORNIA CRUDE OIL PRICES

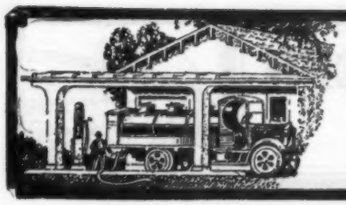
STANDARD OIL CO. OF CALIFORNIA

For its current purchases of crude oil at the well (unless otherwise specified) for allowable crude oil produced in accordance with allocations made by the California Statewide Curtailment Committee. All gravities above those quoted take highest price offered in that field. Effective June 19, 1931, at 7 a. m.

Gravity	Signal Hill	Seal Beach, Alamitos Heights	Huntington Beach	Inglewood	Olinda-Brea Canon	Torrance	Richfield	Coyote Hills	Santa Fe Springs	Midway-Sunset, Elk Hills, Buena Vista Hills	Lost Hills
14-14.9	$.65	$.65	$.65	$.65	$.65	$.65	$.65	$.65	...	$.55	$.55
15-15.9	.65	.65	.65	.65	.65	.65	.65	.65	...	.55	.55
16-16.9	.65	.65	.65	.65	.65	.65	.65	.65	...	.55	.55
17-17.9	.65	.65	.65	.65	.65	.65	.65	.65	...	.55	.55
18-18.9	.65	.65	.65	.65	.65	.65	.65	.65	...	.55	.55
19-19.9	.65	.65	.65	.65	.65	.65	.65	.65	...	.55	.55
20-20.9	.65	.65	.65	.66	.66	.65	.65	.65	...	.55	.55
21-21.9	.65	.65	.65	.66	.67	.65	.65	.65	...	.55	.57
22-22.9	.65	.65	.66	.70	.68	.66	.65	.65	...	.55	.59
23-23.9	.67	.67	.68	.72	.70	.67	.70	.66	...	.55	.60
24-24.9	.69	.69	.70	.74	.72	.68	.72	.67	$.65	.61	.62
25-25.9	.71	.71	.72	.76	.74	.70	.74	.69	.65	.64	.64
26-26.9	.73	.73	.74	...	.76	...	...	.71	.65	.66	.66
27-27.9	.75	.75	.76	...	.78	...	...	.73	.68	.68	.67
28-28.9	.77	...	...	...	.80	...	...	.75	.71	.71	.69
29-29.9	.79	...	...	...	...	...	...	.77	.73	.74	.71
30-30.9	.81	...	...	...	...	...	...	.79	.75	.76	.73
31-31.9	...	...	...	...	...	...	...	...	.78	...	...
32-32.9	...	...	...	...	...	...	...	...	.80	...	...
33-33.9	...	...	...	...	...	...	...	...	.83	...	...
34-34.9	...	...	...	...	...	...	...	...	.85	...	...
35-35.9	...	...	...	...	...	...	...	...	.87	...	...

Standard Oil Co. of California prices in other fields:
Wheeler Ridge—55 cents per barrel for all grades (14° to 35.9°).
Coalinga—55 cents for all grades from 14° to 24.9°; 57 cents for 25 gravity.
Newhall, McKittrick and Kern River—55 cents for all grades (14° to 19.9°).
Montebello—65 cents for all grades (14° to 35.9°).
Whittier and LaHabra—65 cents for all grades (14° to 22.9°).
Elwood Terrace, f.o.b. ship—32° to 33.9°, 79 cents; 34° to 34.9°, 81 cents; 35° to 35.9°, 84 cents; 36° and above, 87 cents.
Playa Del Rey—Prices subject to field gathering charge of 5 cents per barrel—19° to 19.9°, 65 cents; 20° to 20.9°, 65 cents; 21° to 21.9°, 66 cents; 22° to 22.9°, 67 cents; 23° to 23.9°, 68 cents; 24° to 24.9°, 67 cents; 25° and above, 68 cents.

(Continued on Page 102)



TANK WAGON MARKETS

Tank wagon quotations for gasoline and kerosene in United States as furnished by the larger marketing concerns Oct. 27

ALL TANK WAGON AND SERVICE STATION QUOTATIONS INCLUDE TAXES

STANDARD OIL CO. (INDIANA)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Chicago	14.0	14.0	3.0	9.0
Decatur, Ill.	14.4	14.4	3.0	9.0
E. St. Louis	13.7	13.7	3.0	8.2
Joliet	14.4	14.4	3.0	9.0
Peoria	14.4	14.4	3.0	9.0
Quincy	14.2	14.2	3.0	8.8
Davenport, Ia.	14.5	12.5	3.0	9.3
Des Moines	13 4	13 4	3 0	8.0
Keokuk	14.5	14.5	3.0	8.3
Sioux City	14.1	14.1	3.0	8.9
Duluth, Minn.	15.5	15.5	3.0	9.9
Mankato	15.1	15.1	3.0	8.0
Minneapolis	13.4	13 4	3.0	9 9
La Crosse, Wis.	16.2	16.2	4.0	10.0
Milwaukee	15.1	15.1	4.0	8.9
Madison	15.3	15.3	4.0	9.1
Detroit, Mich.	14.5	14 5	3.0	10 7
Grand Rapids	14.7	14.7	3.0	10 6
Saginaw	14.9	14.9	3.0	10.8
Evansville, Ind.	15.1	15.1	4.0	9.9
Indianapolis	15.3	15 3	4.0	10 1
South Bend	15.4	15 4	4 0	8.0
Fargo, N. D.	16.9	16.9	3.0	11.9
Huron, S. D.	16.3	16.3	4.0	10.7
Sioux Falls	15.8	15.8	4.0	10.4
K. C., Mo.	13.9	13.9	3.0	7.6
Springfield*	13.9	13.9	3.0	8.5
St. Louis*	12 4	12 4	2 5	8.3
St. Joseph	11.4	9.4	3 0	7 5
Wichita, Kans.	13.8	13.8	3.0	7.8
Bartlesville, Ok.	13.0	16.0	6.0	7.0

*State tax 2 cents, remainder city tax.

A third grade of gasoline, "Stanolind Blue," is sold at all major points at a price 1½ cents or more below the price on the regular grade.

Effective April 15—Discounts on Q.D.A. on 1,000 gallons or more per month throughout territory; Red Crown Ethyl Gasoline, 2 cents off tank wagon price; Red Crown gasoline, 2½ cents off tank wagon price; Stanolind Blue gasoline, 1 cent off tank wagon price. On deliveries of 75,000 gallons or more each classification allowed 1 cent additional discount.

Discounts on resellers authorized agent's agreement; Same amounts as above except made off service station price instead of tank wagon price.

SOUTHWESTERN DISTRICT

Magnolia Petroleum Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Dallas, Tex.	13.0	14.0	4.0	8.0
Fort Worth	13 0	14 0	4 0	7 0
Houston	12 0	14 0	4.0	8.0
San Antonio	12 0	14 0	4.0	7.0
El Paso	14 0	16.0	4 0	10 0
Texarkana	12 0	14 0	4 0	8.0
Muskogee, Ok.	12 0	14.0	5.0	8 0
Okla. City	13.0	15.0	5 0	7 0
Tulsa	13.0	15.0	5.0	8.0
Ft. Smith, Ark.	*15.5	16 5	5 0	*11 0
Little Rock	*16.5	17.5	6.0	*11.0

One-cent rebate made from posted station prices to cash purchasers in Louisiana, Arkansas and Tennessee.

*Less 2 cents to dealers.

NEBRASKA

Standard Oil Co. (Nebraska)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Omaha	15 25	16.25	4 0	9.25
McCook	16 00	17 75	4.0	10.75
Norfolk	15.75	16 75	4 0	9 75
N. Platte	16 75	17 75	4.0	10.50
Scottsbluff	16.00	16.00	4.0	10.25

Note—Dealers' discount allowed as follows: Red Crown Ethyl, 3 cents off station price; Red Crown, 2½ cents off normal service station price; Nebraska Blue (third grade) 1 cent off normal service station price.

ROCKY MOUNTAIN DISTRICT

Continental Oil Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Denver, Colo	14.0	17.0	4.0	12.5
Pueblo	12 0	15.0	4.0	12 0
Grand Junc.	17 0	20 0	4.0	14.5
Casper, Wyo.	14.0	17.0	4.0	10.0
Cheyenne	14 0	14 0	4 0	13 5
Butte, Mont.	17.0	20.0	5.0	16 0
Billings	20 0	20.0	5 0	14.5
Great Falls	20 0	22 0	5 0	16 0
Helena	20.0	23.0	5.0	16.0
Salt Lake, Utah	17.5	20.5	4.0	16.0
Albu'que, N. M.	17.0	20 0	6.0	14.0
Boise, Idaho	20.5	23.5	5.0	18.0
Twin Falls†	*20.5	21.0	5.0	18.0

†1½-cent discount off tank wagon to dealers.

PACIFIC COAST TERRITORY

	Gasoline			Kero.
	Wh'ls'e price	Retail* price	Incl'ds tax of	tank wagon
Fresno	19.5	16.5	3.0	17.0
San Francisco	19.5	16.5	3.0	15.5
Los Angeles	19.0	16.0	3.0	15.5
Reno, Nev.	23.5	20.5	4.0	19.0
Portland, Ore.	21.0	18.0	4.0	16.5
Seattle, Wash.	22.0	19 0	5.0	16.5
Tacoma	22.0	19.0	5.0	16 5
Spokane	25.5	22.5	5.0	20.5
Pheonix, Ariz.	15.5	16.0	5.0	20.0

Above prices are at company's plant or depots as company does not operate stations. A 6-cent per gallon discount is given dealers and customers taking tank wagon lots except in Phoenix where the discount is 3 cents plus a 2-cent special temporary discount subject to withdrawal at any time.

*Retail prices posted by Standard Stations, Inc., a subsidiary.

PENNSYLVANIA-DELAWARE AND PART OF NEW ENGLAND

Atlantic Refining Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Pittsburgh, Pa.	*13.0	*12.0	...	11 0
Philadelphia	*10.0	*10 0	...	11.0
Scranton	*10.0	*11 0	...	11 0
Allentown	*10 0	*11.0	...	11.0
Altoona	*11 0	*12 0	...	11 0
Erie	*11 0	*12 0	...	11.0
Dover, Del.	14.0	15.0	3.0	11 0
Wilmington	14.0	15.0	3 0	11 0
Springf'd, Mass.	12.0	13 0	3.0	10 0
Worcester	14.3	15.3	3.0	10.0
Boston	13.5	14.5	3.0	10.0
Providence, R.I.	12.1	13.1	3.0	10.0
Hartford, Conn.	13.0	14.0	3 0	10 0
New Haven	14.6	15.6	3.0	10.0

*Does not include tax of 3 cents in Pennsylvania. Pennsylvania tax is collected by the dealer and paid by him direct to the State. The above prices are subject to discounts to the dealers and to commercial accounts under contract for one year in accordance with Code of Ethics.

CENTRAL SOUTH DISTRICT

Standard Oil Co. (Louisiana)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
N. Orleans, La.	14 5	14 5	6.0	12 0
Baton Rouge	15.0	16.0	5.0	12 0
Alexandria†	16 0	16 0	6.0	12.0
Lafayette*	16.0	17.0	6 0	12.0
Lake Charles*	15 0	15 0	6 0	12 0
Shreveport	15 5	16.5	5.0	12.0
Knoxville, Tenn.	18.5	19.5	6.0	13.5
Memphis	15 5	16 5	6 0	10.0
Chattanooga	18.0	19.0	6.0	12.0
Nashville	17.5	18.5	6.0	12.5
Bristol	18.0	19.0	6 0	14.0
Lt. Rock, Ark.	16.5	17.5	6.0	11.0

*Includes city tax of 1 cent. Louisiana kerosene prices include 1-cent state tax. New Orleans kerosene price also includes 1-cent city tax.

†Gasoline price at Alexandria includes 1-cent tax in parish of Rapides.

Two-cent discount off gasoline and kerosene tank wagon price to dealer and commercial accounts.

ATLANTIC COAST DISTRICT

Standard Oil Co. (New Jersey)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Atl'tic City, N.J.	14 7	15 7	3.0	11 5
Newark	13.7	14.7	3.0	10.5
Annapolis, Md.	15 2	16.2	4.0	11.0
Baltimore	14.4	15.4	4.0	8.5
Cumberland	16.2	17.2	4.0	12.0
Wash'ton, D. C.	12.9	13 9	2.0	10.7
Danville, Va.	17.0	18.0	5.0	11 3
Norfolk	15 5	16 5	5.0	10.3
Petersburg	16.5	17.5	5.0	11 3
Richmond	15.9	16 9	5.0	10.7
Roanoke	17.2	18.2	5.0	12.0
Charles'n, W.Va.	15.7	16.7	4.0	11.5
Keyser	16 3	17 3	4.0	12.1
Parkersburg	14.4	15.4	4.0	10.3
Wheeling	15.6	16.6	4.0	11.4
Charlotte, N. C.	17 0	17 0	6.0	10.7
Hickory	18 8	19 8	6.0	12.6
Mount Airy	18.7	19.7	6.0	12.5
Raleigh	18 4	19.4	6.0	12.2
Salisbury	18.7	19.7	6.0	13.5
Charleston, S.C.	16 5	17.5	6.0	10.2
Columbia	18.4	19.4	6.0	12.2
Spartanburg	18.7	19.7	6.0	13.5

Two cents per gallon discount off retail tank wagon price of gasoline to dealers except Washington, D. C., and State of Maryland and New Jersey, where discount is 3 cents.

NEW YORK AND PART OF NEW ENGLAND DISTRICT

Standard Oil Co. (New York)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Albany, N. Y.	16 6	17.6	2.0	15.6
New York*	15.3	15.3	2.0	14.3
Buffalo	15.8	15.8	2.0	14.8
Rochester	16 0	16 0	2.0	14.0
Syracuse	16 8	16.8	2.0	14.8
Boston, Mass.	16 5	16 5	3.0	13 5
Augusta, Me.	18.8	18.8	4.0	14.8
Manch'tr, N. H.	18.4	18.4	4.0	14 0
Burlington, Vt.	19.3	19.3	4.0	15.3

*Prices in steel barrels.

OHIO

Standard Oil Co. (Ohio)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Ohio points	15.0	16.0	4.0	*12.0

Dealers and commercial accounts 2 cents under tank wagon.

*Service station price 13 cents.

SOUTHERN DISTRICT

Standard Oil Co. (Kentucky)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Atlanta, Ga.	13 0	15 0	6 0	12.5
Augusta	19.0	20 0	6.0	14.0
Macon	19.0	19 0	6.0	12.0
Savannah	17.0	17.0	6.0	12.0
Birm'ham, Ala.	15.5	15 5	6 0	13.0
Mobile	17.5	17 5	5.0	10.0
Montgomery	19 0	19 0	5.0	13.5
Clarks'le, Miss.	18.0	20.0	5.0	13.5
Jackson	15 5	15.5	5 0	11 5
Natchez	18.0	20 0	5.0	13.5
Gulfport	16.0	16 0	5.0	13.5
Vicksburg	14 5	14 5	5.0	11 5
Jack'ville, Fla.	18.0	16 0	7.0	12 0
Miami	17 0	18.0	7.0	13 0
Pensacola	20 0	21.0	7.0	13.0
Tampa	17 0	17 0	7.0	12 0
Lexington, Ky.	16.0	17 0	5.0	12 0
Covington	17.0	19.0	5.0	11.0
Louisville	16 0	17 0	5.0	10.0
Ashland	17.0	19 0	5.0	13.0
Paducah	18 0	18.0	5.0	11.0
Bowling Green	19.0	21 0	5.0	14.5
Corbin	18.0	19.0	5.0	15.0

A third grade "Kyso Green," is sold at a price generally 2 cents below the price on the regular grade.

In addition to the state tax of 4 cents on gasoline, Montgomery has city tax of 1 cent on gasoline and one-half cent on kerosene. Kerosene prices in Georgia include 1-cent tax. In Florida, an inspection fee of 0.125 cent; in Alabama, an inspection fee of one-half cent on kerosene and one-fourth cent on gasoline. To Pensacola, Montgomery and Birmingham state taxes add 1-cent levy tax. To Gulfport state tax add privilege tax of 2 cents. To Mobile state tax add 1-cent city tax and 2½ cents county tax.

Effective April 2 price to dealers 2 cents under posted tank wagon price.

NAPHTHA

	Tank wagon	Tank car
Oleum spirits	10.7	6.0
V.M.P. naphtha	13.7	7.5
Cleaners' naphtha	14.2	9.0
Stanisol	14.2	9.0

Tank wagon prices f.o.b. Chicago and Whiting, effective July 2.

STANOLIND FURNACE OIL IN CHICAGO

Effective July 1, prices f.o.b. Chicago, tank wagon prices: 1 to 99 gallons, 8 cents; 100 gallons or more 6 cents.

Stanolex Fuel

Effective May 9, f.o.b. Chicago, tank wagon prices: 1 to 199 gallons, 7 cents; 200 gallons or more, 5 cents. Sinclair met this by bringing down the price of its No. 2.

Fuel Oils

Chicago tank wagon prices (in lots of 400 gallons and over): 38-40 straw distillate, 6 cents; 32-36 gas oil (light zero), 5.5 cents; 32-36 gas oil (industrial), 5.25 cents; 28-30 zero fuel oil, 5 cents; 24-26 fuel oil, 4.25 cents; 18-22 fuel oil, 3.75 cents.

TANK WAGON CHANGES

Standard Oil Co. of Indiana reduced the gasoline tank wagon price to 13.4 cents in Des Moines, Iowa, and Minneapolis, Minn., October 20. Kerosene prices were changed in Indianapolis, Ind., to

(Continued on Page 103)

CRUDE OIL PRICES

(Continued from Page 93)

Refining Co., August 22, 45 cents; Magnolia Petroleum Co. and Standard Oil of Louisiana, August 24, 45 cents. Urbana posting discontinued by Standard Oil Co. of Louisiana on August 24, 1931. Bellevue posted by Magnolia Petroleum Co.; Urania by Louisiana Oil Refining Co.; Calion by Gulf Refining Co.; East El Dorado by Gulf Refining Co. and Magnolia Petroleum Co.; Stephens, Ark., by Louisiana Oil Refining Co. and Atlantic Oil Producing Co.

SOUTH CENTRAL AND SOUTHWEST TEXAS

Darst Creek (Aug. 22, 1931)*	$ .53
Luling (Aug. 22, 1931)†	.34
Mirando (Aug. 22, 1931)*	.66
Pettus (Aug. 22, 1931)*	.76
Salt Flat (Aug. 22, 1931)*	.53
Thrall‖	
Lytton Springs (Lockhart). See gravity table	
Dobrowolski‖	
Same as Mid-Continent gravity scale up to and including 38-38.9°.	
Somerset¶	
Same as Mid-Continent gravity scale up to and including 38-38.9°.	

*Texas, Humble and Gulf all posted on August 22. †Magnolia Petroleum Co. ‖Thrall prices same as North Central Texas less 19¼ cents per cwt. freight. ¶Grayburg Oil & Refining Co., Pioneer Oil & Refining Co. and Texas Petroleum Products. †Pioneer Oil & Refining Co.

ROCKY MOUNTAIN STATES

Ohio Oil Co.-Midwest Refining Co.

Iles, light (Aug. 24, 1931)	$ .75
Iles, heavy (Aug. 24, 1931)	.53
Fort Collins (Aug. 24, 1931)	.61
Florence (Aug. 24, 1931)	.56
Wellington (Aug. 24, 1931)	.61
Dutton Creek (Aug. 24, 1931)	.60
Rock Creek, Wyo. (Aug. 24, 1931)	.70
Frannie, light (Aug. 24, 1931)	.53
Frannie, heavy (Aug. 24, 1931)	.43
Salt Creek.....Mid-Continent gravity table	
Big Muddy (Aug. 24, 1931)	.63
Grass Creek (Aug. 24, 1931)	.90
Elk Basin (Aug. 24, 1931)	.96
Lance Creek (Aug. 24, 1931)	1.05
Poison Spider (Mar. 5, 1931)	.70
Notches (Mar. 14, 1927)	.66
Hudson (June 3, 1931)	.66
Lander (Mar. 5, 1931)	.40
Rex Lake (Feb. 23, 1930)	1.25
Osage (Apr. 15, 1931)	.90
Lost Soldier (Aug. 25, 1931)	.54
Hamilton Dome (Mar. 14, 1927)	.93
Greybull (Aug. 24, 1931)	.90
Torchlight (Aug. 24, 1931)	.90
Cat Creek (Aug. 24, 1931)	.90
Pondera (Aug. 24, 1931)	.90
Sunburst, Mont. (Aug. 24, 1931)	.90
Hogback, N. Mex. (Aug. 24, 1931)	.90
Lea County, N. Mex. (Aug. 24, 1931)	.35
Border, Mont.	1.05
Red Coulee, Alberta	1.55
Dry Creek, Mont. (Aug. 24, 1931)	1.00
Maljamar (Aug. 22, 1931)	1.00
Artesia-Jackson (Aug. 22, 1931)	.35

Note—Salt Creek, Cat Creek, Dry Creek, Dallas-Derby, Hudson, Greybull and Hogback posted by Midwest Refining Co. and remainder by Ohio Oil Co. Both companies posted Grass Creek light and Elk Basin, Lost Soldier posted by Producers & Refiners Corp. Artesia, Jackson and Maljamar posted by Continental Oil Co. Border and Red Coulee posted by Imperial Refining Co. Ohio Oil Co. ceased posting Artesia on March 5, 1931. Lea County posted by Humble Oil & Refining Co. Fort Collins, Wellington, Orchard, Florence, Rattlesnake and Table Mesa by the Continental Oil Co. Osage posted by Arro Oil & Refining Co.

MIDDLE WESTERN STATES

Ohio Oil Co.

(Effective August 24, 1931)

Lima	$ .90
Wooster	1.00
Illinois	.90
Indiana	.90
Princeton	.90
Plymouth	Shut in
Western Kentucky	.75
Midland, Mich. (Oct. 9, 1931)*	.55
Dundee, Mich.†	
Same as Stanolind Crude Oil Purchasing Co.'s Mid-Continent gravity scale	
Upper and Lower Traverse Sands, Mich.†	
....Same as Mid-Continent gravity scale	
Somerset, Ky. (Sept. 26, 1931)	.85
Hart County, Ky. (Oct. 1, 1931)‖	.50

*Posted by Pure Oil Co. †Posted by Standard of Indiana for boat shipment. ‡Posted by Stoll Refining Co. Somerset, Ky. crude purchased by Ashland Refining, Ashland, Ky., and delivered through Cumberland Pipe Line.

MEXICO

Panuco*	$ .45

*F.o.b. ship, based on September transactions and exclusive of production and export taxes and bar dues.

CANADA

Ontario (Aug. 24, 1931):	
Petrolia*	$1.00
Oil Springs*	1.07
Alberta (Aug. 24, 1931):	
Turner Valley:†	
Crude oil 45-49.9	2.80
Crude oil 50 and above	2.65
Crude naphtha	2.13
Discolored naphtha	2.03

*Imperial Oil, Ltd. †Imperial Oil, Ltd. and Regal Oil & Refining Co.

Of Interest to Sales Departments

NEW U. S. MOTOR FUEL TESTS NOW EFFECTIVE

The new specifications for U. S. Motor gasoline which became finally effective October 21 for departments and independent establishments of the United States will be generally accepted by all refiners in the United States in their shipments to domestic buyers. A majority of refiners have been selling through their own stations and through dealer outlets, gasolines which are equal or better than that prescribed as minimum in the new government specifications. The new specifications will automatically become effective in several states which require all gasolines to meet government specifications.

The principal interest in the new specification centers in the requirement that the vapor pressure at 100° F. shall not exceed 12 pounds per square inch at normal barometric pressure at the point of delivery. Many refiners have had the vapor pressure of their motor fuels increased materially with no material change in the distillation range. This is usually due to the increased output of cracked gasolines with their larger percentages of the more volatile fractions. However, most refiners will have no trouble in meeting the new government requirement.

Following are the new government specifications for the U. S. Motor gasoline:

Corrosion Test. — Method 530.22. A clean copper strip shall not show more than extremely slight discoloration when submerged in the gasoline for three hours at 122° F.

Distillation Range.—Method 100.14. When the thermometer reads 75° C. (167° F.) not less than 10 per cent shall be evaporated.

When the thermometer reads 140° C. (284° F.) not less than 50 per cent shall be evaporated.

When the thermometer reads 200° C. (392° F.) not less than 90 per cent shall be evaporated.

The residue shall not exceed 2 per cent.

Per cent evaporated shall be found by adding the distillation loss to the amount collected in the receiver at each specification temperature.

The Government reserves the right to reject material during the months of December, January, February and March in those localities where the normal mean minimum temperature during the month of January is less than 27° F. if when the thermometer reads 65° C. (149° F.) less than 10 per cent shall be evaporated.

Sulphur.—Method 520.11. Sulphur shall not exceed 0.10 per cent.

Vapor Pressure—Method[2]. The vapor pressure at 37.8° C. (100° F.) shall not exceed 12 pounds per square inch at the normal barometric pressure at the point of delivery.

The Government reserves the right to reject material (a) during the months of December, January, February and March in those localities where the normal mean minimum temperature during the month of January is greater than 27° F. if the vapor pressure at 37.8° C. (100° F.) exceeds 10 pounds per square inch; (b) during the months of June, July, August and September if the vapor pressure at 37.8° C. (100° F.) exceeds 8 pounds per square inch.

Departments purchasing gasoline for use in tropical areas require a maximum vapor pressure of 8 pounds per square inch throughout the year.

[2]The method and procedure to be used in making the vapor pressure test is described in Method D323-30T of the American Society for Testing Materials.

NATURAL GAS REDUCES DEMAND FOR OIL IN WESTERN STATES

The effect of competition of natural gas with fuel oil is apparent in the report of fuel oil consumption in the Pacific Coast territory for 1930. The report of the Bureau of Mines which has been completed shows that the fuel oil deliveries at gas and electric power plants in the States of California, Oregon, Washington, Nevada and Arizona totaled 4,904,759 bbls. in 1930 which compares with 8,721,808 bbls. in 1929. Practically all of the fuel oil was furnished by refiners operating plants in California. More and more gas is being used instead of fuel oil by power plants and this gas is also replacing the artificial gas in which fuel oil is used in the manufacturing process.

The railroads and steamship lines which are the largest users of fuel oil consumed slightly more fuel oil in 1930 than they did in 1929. The industrial consumption in most cases decreased in 1930. There was a material decrease in oil company requirements.

The total fuel oil marketed, including shipments, amounted to 137,240,975 bbls. in 1930 as compared to 141,740,257 bbls. the previous year, a decrease of 4,499,282 bbls. Shipments increased from 30,145,162 bbls. in 1929 to 30,949,722 bbls. in 1930, partially offsetting the decrease of 5,303,842 bbls. in domestic deliveries, which declined from 111,595,095 bbls. in 1929 to 106,291,253 bbls. in 1930. The distribution of these domestic deliveries according to uses is shown in the following table:

FUEL OIL DELIVERIES, PACIFIC COAST DISTRICT, 1929-1930

(Barrels of 42 gallons)

Use—	1929	1930
Railroads	29,609,810	26,613,550
Steamships (including tankers)	35,001,809	38,778,113
Gas and electric power plants	8,721,808	4,904,759
Smelters and mines	4,465,706	3,640,020
Iron and steel products	1,693,478	1,514,507
Chemicals and allied industries	961,011	992,530
Automotive industries	32,518	35,113
Textiles and their products	15,928	41,487
Paper and wood pulp	1,235,215	693,030
Logging and lumbering	1,725,633	1,410,791
Cement and lime plants	2,588,819	2,179,583
Ceramic industries	488,678	244,714
Food industries	3,467,395	3,191,942
Other manufacturing	847,615	1,021,102
Commercial heating	6,145,608	4,801,213
Domestic heating	41,046	33,225
U. S. Navy, Army transports, etc.	3,030,356	5,685,838
Used as fuel by oil companies	5,728,354	4,820,208
Miscellaneous uses	5,794,308	5,689,528
Total domestic deliveries	111,595,095	106,291,253
Foreign and intercoastal shipments	30,145,162	30,949,722
Total deliveries	141,740,257	137,240,975

INVESTIGATE GASOLINE USE IN STARTING MOTOR

Contrary to the general belief, less gasoline is used in starting a cold motor with the choke full out than is used in starting the same motor on part choke. This interesting fact is one of many confirmed by engineers in the elaborate testing laboratories of the Associated Oil Co. at Avon, Calif. J. M. Evans, manager of sales engineering and development for Associated, in a recent bulletin issued by the company, pointed out the following data:

The purpose of choking a car in an endeavor to start it when the engine is cold is to permit the feeding to the motor of a richer-than-normal mixture. On the average carburetor, when the choke is pulled full out, a mixture by weight of one part of air to one part of gasoline is obtained. This is too rich a mixture to burn properly. What actually happens is that, due to the volatility characteristics of a normal gasoline, about 10 per cent of the one-to-one mixture which is fed under choking conditions, will evaporate even in the cold motor. When 10 per cent of the rich mixture vaporizes, it produces approximately a ten-to-one mixture of air to gasoline in the cylinders, which mixture is combustible and which represents about the richest mixture than can be successfully handled by the motor. As the motor warms up, the choke is gradually returned to its normal position, producing a mixture of about fifteen-to-one.

A full choke in starting a cold motor, however, uses less gasoline than a partial choke, since the cylinders receive a combustible mixture more quickly from the rich one-to-one mixture. This means less crankcase dilution and quicker starting. A carburetor so adjusted as to give a mixture leaner than fifteen-to-one in normal operation will frequently cause backfiring, since the mixture is too lean to ignite properly in the cylinders, and will often explode instead in the exhaust pipe.

QUINLAN MANAGER OF DERBY RETAIL MARKET

P. J. (Pat) Quinlan, who has been engaged in the marketing of petroleum products, has been appointed manager of the retail marketing division of the Derby Oil Co., Wichita, Kans. He succeeds Fred Lawson, who recently resigned.

Mr. Quinlan for a number of years was Kansas division manager of the Standard Oil Co. of Indiana with headquarters in Wichita. Later he occupied a similar position with the Phillips Petroleum Co. while that company was expanding its marketing facilities in Kansas.

The Derby company expects to gradually expand its bulk station and service station facilities. The company in 1926 sold its stations to the Marland Refining Co. For a five-year period which ended in March of this year, the company under its agreement with the Marland company, was not permitted to operate stations bearing the Derby name. At present the company is operating stations in 60 cities located in Kansas, Missouri and Iowa.

VETOES TEXAS BILL

AUSTIN, Tex., Oct. 26. — Governor Sterling has vetoed the bill passed at the recent special session of the legislature diverting 1 cent of the 4-cent gasoline tax to the retirement of county and district road bonds.

WITHDRAWS FROM PLAN TO DISTRIBUTE FOODS

The Standard Oil Co. of California has withdrawn from the plan under which its subsidiary, the Pacific Public Service Co., proposed to license producers and distributors of frozen food products under the Birdseye process.

Several months ago the Standard Oil Co. entered into an agreement with the General Foods Corp. for the formation of a company to operate in the Pacific Coast states for the distribution of frozen foods. The proposed company, in which Pacific Public Service and General Foods were to hold equal interests, was intended to utilize the refrigeration facilities owned by Pacific Public Service.

"A thorough study of the western situation by the Standard Oil Co. has indicated," the formal statement said, "that the development under these patents can best be accomplished through direct production and distribution rather than by licensing. This presents a situation different from the one which first attracted the Standard Oil Co.'s interest. Food distribution is not within the sphere of Standard Oil Co.'s or Pacific Public Service Co.'s activities. Because General Foods Corp. is peculiarly equipped for the production and distribution problems involved it has been mutually agreed that General Foods Corp. should proceed without the Standard Oil Co.

"The Standard Oil Co. of California has not altered its opinion with respect to the merit of the process and does not relinquish its participation because of any lack of confidence in the ultimate success of its development."

KANSAS REFUNDS INCREASE

WICHITA, Kans., Oct. 26.—Gasoline tax refunds are increasing rapidly in Kansas and now exceed those of any other state, according to state officials. The refunds are made to farmers who use the gasoline for agricultural purposes. With a 4-cent tax these refunds under the new Kansas law totaled $1,938.99 from May to October this year. This compares with a total refund of $2,000,000 in 1930 which was considered excessive at the time. For the entire 12 months of 1926 the refund was $150,000. To meet this problem, which threatens to do away with a large part of the state's revnue for road building, there is considerable agitation in the state to return to a 2-cent gasoline tax with no refunds.

TO COLOR FUEL OILS

NEW YORK, Oct. 26. — Under the terms of a new law, all fuel oil imported into Turkey henceforth will have to be artificially colored, this step being taken to stop the practice of re-treating light fuel oil and selling a part of the redistilled fractions as kerosene.

Import taxes on kerosene in Turkey are more than 12 times that levied on heavy oil imports and an extensive redistillation business has grown up in recent years. The new law provides that the coloring of fuel oil may be done with dyes or any other means imparting a definite coloring to the oil without impairing its quality. Sale of denatured fuel oil of a density of 0.860 or less is prohibited under the terms of the law.

BUILDING BULK STATION

The American Oil Co., marketing subsidiary in eastern states of the Pan American Petroleum & Transport Co., is building a large bulk station at Greensboro, N. C. A combination warehouse and garage with facilities for the storage of 100,000 gallons of petroleum products is being built.

Oil Shares Deflated By $8,000,000,000

Industry Will Take Part in General Recovery, Says Standard Oil Co. of New Jersey. Present Low Values Seen as Unjustified

By A. E. Mockler
New York Bureau, The Oil and Gas Journal

NEW YORK, Oct. 26.—Declines in selling prices for oil securities during the market decline have represented a deflation of $8,000,000,000 in the market value of oil securities, and the decline in selling prices for oil shares has been out of proportion to actual changes within the industry, says the Standard Oil Co. (New Jersey) in an interesting editorial on the question of oil stock values in the forthcoming issue of "The Lamp."

"From 1926 to near the end of 1929," says the Lamp, "we were in a period of inflation which carried values, as translated into quotations on the New York Stock Exchange, to record high levels. In the two years since then we have been in a depression, with almost uninterrupted progress in deflating these values. The enthusiasm which made buyers of us all in the belief that we had entered a new financial and economic era, in which first principles no longer applied, has been succeeded by a wave of pessimism which has gone as far toward the other extreme.

"Between top prices for stocks and the deflation there has occurred such an apparent contraction of wealth as to explain without further reasons the public's loss of confidence, which has been expressed in reduced purchasing. The former paper millionaires of 1929 will require some time to reorient themselves and become accustomed to the new set of controlling conditions.

Picture of What Happened

"Oil shares are not especially popular with professional traders, and their fluctuation is therefore a somewhat conservative criterion of the change which has taken place in the general list. Many instances can be found of industrials which rose more rapidly than oils during the inflation and which have been liquidated more drastically since. Other industries benefited more through rising prices for their products and stimulated sales between 1926 and 1929, and conversely, have suffered more of a shrinkage in business in the past two years. For this reason, a summarized story of the course of prices of oil stocks is a pretty fair picture of what has happened to security holders, carried into the exhilarated atmosphere of a record bull market, and without opportunity for acclimatization, dropped into the cold air of lower strata, all in a brief period of from three to five years.

"For this purpose, the market values at different dates of 34 leading oil companies have been studied.

"We find that at their highest market quotations in 1926 these companies had a total common stock value of $6,945,243,000.

"How did these stocks fare during inflation?

"At their high points in 1929, the market quoted a total value for the 34 companies of $10,916,773,000. Since it is popularly estimated that the actual investment in the American petroleum business is in the neighborhood of $11,000,000,000, it will appear that the market in the latter part of 1929 put a value of substantially this amount on the common stocks of 34 companies. While these are the largest in the industry, there are also thousands of smaller companies with a very large aggregate investment.

"The average rise in the value of the group was 57.18 per cent.

"Then came the deluge of selling and rapid fall in prices. To the date of writing almost all of these issues made their lowest prices of many years on October 8. Their bear market values as represented by quotations on the New York Stock Exchange have been calculated as of that date.

Scope of Shrinkage

"Stocks rated at nearly $11,000,000,000 in 1929 were down to $2,705,850,000. That is to say, $100 bought as much of an interest in the petroleum business on October 8, 1931, as $400 did in 1929. In many instances stocks have been selling for less than their current book values after depreciation. The declines are even more impressive if looked at in respect to particular companies. One of the largest of the integrated companies dropped from $246,000,000 to less than $34,000,000, another from $111,000,000 to $11,000,000, and a third from $141,000,000 to $40,000,000. Declines almost as great were the case with other members of the group.

"Of course, no such change in actual values has taken place, either during the advance or in the slump. In the matter of physical assets there has been an increase since the market broke. The price of stocks may be said to represent the consolidated view of the investing public of values at the time quotations are made, but this view is affected by many changing factors, such as the actual worth of assets behind a stock, the earning power, money conditions, etc. The assets remain, but for the time being earning power has fallen until deficits from operations have been the rule rather than surpluses. Not all of these companies make interim reports; a dozen of them which published earnings for the first six months of 1931 showed a combined total loss of about $25,000,000, and a deficit after paying dividends of three times that amount. No large oil company which so far reported has shown a profit.

"To accept such a situation as permanent or even as of very long duration is as foolish as hindsight shows the unrestrained enthusiasm of 1929 to have been. Business is going through a difficult time of reorganization, and reconciling itself to a lower price basis. In doing this it has had to take tremendous bookkeeping losses in inventories, most of which had to be absorbed in a single year. The petroleum industry, as has been proved by an increase in domestic demand for gasoline even in 1931, is indispensable in the scheme of civilization, and it will share proportionately with other essential industries in the return to prosperity."

Twenty Representative Stocks

The Oil and Gas Journal's weekly average price of 20 representative petroleum stocks listed on the New York Stock Exchange and New York Curb, based on closing quotations for Wednesday, was as follows:

Feb. 18	28.53	June 24	22.33
Feb. 25	29.33	July 1	22.32
Mar. 7	27.67	July 8	21.24
Mar. 11	26.53	July 15	19.79
Mar. 18	26.78	July 22	21.32
Mar. 25	26.85	July 29	20.68
Apr. 1	24.80	Aug. 5	20.80
Apr. 8	25.52	Aug. 12	21.00
Apr. 15	24.72	Aug. 19	24.25
Apr. 22	22.72	Aug. 26	23.24
Apr. 29	20.54	Sept. 2	22.30
May 6	20.74	Sept. 9	20.23
May 13	20.38	Sept. 16	18.30
May 20	19.25	Sept. 23	17.64
May 27	18.35	Sept. 30	15.83
June 3	18.00	Oct. 7	15.86
June 10	19.62	Oct. 14	16.43
June 17	19.23	Oct. 21	17.58

EAST TEXAS FIELDS

(Continued from Page 26)

scale and which are still operative, are responsible for the average price a little below the present posted price of 70 cents for 40 gravity and 68 cents for 39 gravity. No record is made of the price of about 2,743,000 bbls. of crude oil in field storage. This together with the 71,485,361 bbls. of record shipments and the scattered barrelage that went at the very lowest prices makes up the approximately 75,000,000 bbls. of oil produced up to the close of the report.

In arriving at a 35-cent price as the weighted average for the field up to the middle of this month the statistician expresses the opinion that if anything the average is a shade low, when the price of the oil in storage is considered, but he thinks the difference would be represented by a fraction of a cent per barrel.

Of the $25,170,935 received for the 71,485,361 bbls. delivered to refiners the royalty owners have not received even this relatively small amount, as payments have been suspended on a considerable portion of it because of alleged questionable titles.

COMPLETIONS IN EAST CENTRAL TEXAS

Cherokee County

Helen-Clair Oil Co.'s No. 1 Mrs. M. P. Perkins, location abandoned.

Delta County

Hood's No. 1 Baker, dry and abandoned, total depth 1,559 feet.

Gregg County

Alemeda Oil Corp.'s No. 1 Doby, top sand 3,684 feet, initial production 150 bbls. per hour through various chokes, total depth 3,702 feet. Amerada Petroleum Corp.'s No. 1 Hearne, top sand 3,513 feet, initial production 50 bbls. in 30 minutes through tubing, total depth 3,535 feet. Arkansas Fuel Oil Co.'s No. 1 Adrian and McCrairy, top sand 3,573 feet, initial production 124 bbls. in 30 minutes through tubing, total depth 3,598 feet. Same company's No. 3 Houston, top sand 3,612 feet, initial production 76 bbls. in 30 minutes through tubing, total depth 3,625 feet. Same company's No. 2-B McKinley, top sand 3,599 feet, initial production 121 bbls. per hour through three-fourths inch tubing choke, total depth 3,628 feet. Same company's No. 3-B McKinley, top sand 3,548 feet, initial production 128 bbls. in 30 minutes through tubing, total depth 3,575 feet. Same company's No. 2 Tinnery, top sand 3,582 feet, initial production estimated 80 bbls. in 30 minutes through open tubing, total depth 3,598 feet. Same company's No. 2 Whittaker, top sand 3,503 feet, initial production 95 bbls. in 30 minutes through tubing, total depth 3,530 feet. Same company's No. 3 Whittaker, top sand 3,521 feet, initial production 105 bbls. in 30 minutes through tubing, total depth 3,546 feet. Atlantic Oil & Production Co.'s No. 1 J. Wilson, top sand 3,582 feet, initial production 107 bbls. per hour through 1-inch tubing choke, total depth 3,612 feet.

Barnsdall Oil Co.'s No. 1 R. E. L. Ferguson, top sand 3,640 feet, initial production 100 bbls. per hour through seven-eighths inch tubing choke, total depth 3,678 feet. Same company's No. 2 Ferguson, top sand 3,641 feet, initial production 126 bbls. per hour through seven-eighths inch tubing choke, total depth 3,667 feet. Same company's No. 12 McGrede, top sand 3,630 feet, initial production 135 bbls. per hour through 1-inch tubing choke, total depth 3,659 feet. Barnsdall and Sun Oil Co.'s No. 2 Bingham, top sand 3,537 feet, initial production 111 bbls. per hour through three-fourths inch tubing choke, total depth 3,567 feet. Bishop Oil Corp.'s No. 2 Ritchie, top sand 3,565 feet, initial production estimated 125 bbls. per hour through various chokes, total depth 3,615 feet. Cal Pet Corp.'s No. 1 C. B. Johnson, top sand 3,577 feet, initial production 125 bbls. per hour through 1-inch tubing choke, total depth 3,600 feet.

East Texas Refining Co.'s No. 1 G. W. Tuttle, top sand 3,522 feet, initial production 45 bbls. in 10 minutes through open tubing, total depth 3,530 feet. Same company's No. 2 White, top sand 3,561 feet, initial production 165 bbls. per hour through tubing, total depth 3,600 feet. Empire Gas & Fuel Oil Co.'s No. 2 Jeter, top sand 3,544 feet, initial production 124 bbls. in 30 minutes through open tubing, total depth 3,615 feet. Empire Gas & Fuel Oil Co.'s No. 1 Spurrier, top sand 3,538 feet, initial production 124 bbls. in 30 minutes through open tubing, total depth 3,601 feet.

Fain and McGaha's No. 5 Clemments, top sand 3,583 feet, initial production 155 bbls. per hour through 1-inch tubing choke, total depth 3,615 feet. F. H. E. Oil Co.'s No. 2 B. C. Christian, top sand 3,642 feet, initial production estimated 140 bbls. per hour through various chokes, total depth 3,672 feet. Same company's No. 3 Flemster, top sand 3,608 feet, initial production estimated 135 bbls. per hour through various chokes, total depth 3,638 feet. M. E. Gaskill's No. 1 Sam Kay, top sand 3,636 feet, initial production 110 bbls. per hour through three-fourths inch tubing choke, total depth 3,657 feet.

Gulf Production Co.'s No. 2 Fonville, top sand 3,500 feet, initial production 125 bbls. per hour through three-fourths inch tubing choke, total depth 3,541 feet. Same company's No. 3 Lacy, top sand 3,492 feet, initial production 125 bbls. per hour through three-fourths inch tubing choke, total depth 3,516 feet. Same company's No. 3 Sheppard, top sand 3,502 feet, initial production 120 bbls. per hour through three-fourths inch tubing choke, total depth 3,536 feet. Humble Oil & Refining Co.'s No. 2-B C. B. Johnson, top sand 3,599 feet, initial production 87 bbls. per hour through three-fourths inch tubing choke, total depth 3,640 feet. Same company's No. 1 M. Wells, top sand 3,710 feet, initial production 92 bbls. per hour through three-fourths inch tubing choke, total depth 3,739 feet.

Magnolia Petroleum Co.'s No. 2 E. H. Brawley, top sand 3,464 feet, initial production 204 bbls. per hour through 1-inch tubing choke, total depth 3,491 feet. Same company's No. 3 G. Davis, top sand 3,554 feet, initial production 160 bbls. per hour through 1-inch tubing choke, total depth 3,571 feet. Same company's No. 8 Everett, top sand 3,591 feet, initial production 209 bbls. per hour through 1-inch tubing choke, total depth 3,594 feet. Manziell and others' No. 1 New Hope Church, top sand 3,603 feet, initial production 87 bbls. per hour through three-fourths inch tubing choke, total depth 3,627 feet. Margay Oil Co.'s No. 1 Joe Freeman, top sand 3,703 feet, initial production 120 bbls. per hour through 1-inch tubing choke, total depth 3,727 feet.

O. G. Murphy and others' No. 1 J. B. Doby, top sand 3,510 feet, initial production 150 bbls. per hour through various chokes, total depth 3,545 feet. Owen and others' No. 2 Davis, top sand 3,548 feet, initial production 30 bbls. in 30 minutes through 1-inch tubing choke, total depth 3,576 feet. Same parties' No. 3 Davis, top sand 3,551 feet, initial production 45 bbls. in 30 minutes through various chokes, total depth 3,578 feet. Roeser and Pendleton's No. 2 Sheffield, top sand 3,630 feet, initial production 164 bbls. per hour through tubing, total depth 3,655 feet. Sakavo Oil Co.'s No.

3 C. H. Moore, top sand 3,595 feet, initial production 105 bbls. per hour through tubing, total depth 3,600 feet.

Shell Petroleum Corp.'s No. 1 T. B. Stinchomb, top sand 3,464 feet, initial production estimated 115 bbls. per hour through various chokes, total depth 3,565 feet. Simms and Stanolind Oil & Gas Co.'s No. 1-B Flewellen, top sand 3,657 feet, initial production 165 bbls. per hour through tubing, total depth 3,684 feet. Stanolind Oil & Gas Co.'s No. 3 G. F. Meadows, top sand 3,675 feet, initial production 102 bbls. per hour through tubing, total depth 3,693 feet. Stanolind Oil & Gas Co.'s No. 1 Shoultz, top sand 3,712 feet, initial production 163 bbls. per hour through tubing, total depth 3,749 feet. Same company's No. 2 Shoultz, top sand 3,662 feet, initial production 165 bbls. per hour through open tubing, total depth 3,699 feet. Same company's No. 4 J. F. Wilhite, top sand 3,640 feet, initial production 150 bbls. per hour through various chokes, total depth 3,699 feet. Superior Oil Co.'s No. 2 Andrew Jones, top sand 3,598 feet, initial production 165 bbls. per hour through tubing, total depth 3,672 feet.

Vacuum Oil Co.'s No. 3 Beavers, top sand 3,547 feet, initial production 216 bbls. per hour through open tubing, total depth 3,565 feet. Vacuum Oil Co.'s No. 3 White, top sand 3,523 feet, initial production 228 bbls. per hour through open tubing, total depth 3,576 feet. Wrightman's No. 1 G. E. Adams, top sand 3,582 feet, initial production 140 bbls. per hour through various chokes, total depth 3,625 feet. Yount Lee Oil Co.'s No. 1 Castleberry, top sand 3,585 feet, initial production 120 bbls. per hour through eleven-sixteenths inch tubing choke, total depth 3,604 feet. Same company's No. 2 Orms, top sand 3,483 feet, initial production 150 bbls. per hour through eleven-sixteenths inch tubing choke, total depth 3,503 feet. Continental Oil Co.'s No. 3 C. C. Crews, top sand 3,690 feet, initial production 156 bbls. per hour through open tubing, total depth 3,691 feet. H. P. Key and others' (formerly O. L. Rounds) No. 2 J. A. King, top sand 3,642 feet, initial production 165 bbls. in 7 hours through eleven-sixty-fourths inch tubing choke, total depth 3,650 feet.

Henry Moss' (formerly J. L. Anderson) No. 1 Knowles, top sand 3,520 feet, initial production 120 bbls. per hour through open tubing, total depth 3,600 feet. Petroleum Finance Co.'s No. 1 Clayton, top sand 3,522 feet, initial production 110 bbls. in 30 minutes through open tubing, total depth 3,557 feet. Sinclair Oil & Gas Co.'s No. 1 A. A. King, top sand 3,551 feet, initial production 165 bbls. in 45 minutes through 2½-inch tubing choke, total depth 3,580 feet. H. R. Smith's No. 1 S. S. and Ben Laird, top sand 3,534 feet, initial production 165 bbls. per hour pinched, total depth 3,600 feet. Sun Oil Co.'s No. 8 Hilburn, top sand 3,680 feet, initial production 105 bbls. per hour through three-fourths inch tubing choke, total depth 3,695 feet.

Tarkington & Wells' No. 1 Williams and others, base Pecan Gap 3,055 feet, top Austin chalk 3,683 feet, dry and abandoned, total depth 3,746 feet (formerly Williams and others). Tarkington & Reynolds' No. 1 J. Williams, derrick abandoned. The Texas Company's No. 3 M. T. Cole, top sand 3,529 feet, initial production 140 bbls. per hour through three-fourths inch tubing choke, total depth 3,560 feet. Tidal Oil Co.'s No. 1 S. L. Dansby (formerly Mid-Kansas Oil & Gas Co.), top sand 3,743 feet, initial production 165 bbls. in 3 hours through forty-two sixty-fourths inch tubing choke, total depth 3,747 feet.

Nacogdoches County

Naco Oil Co.'s No. 1 J. G. Orton, location abandoned.

Rusk County

Empire Gas & Fuel Co.'s No. 1 C. O. Christian, top sand 3,765 feet, initial production 23 bbls. per hour through open tubing, total depth 3,773 feet. Same company's No. 2 C. O. Christian, top sand 3,766 feet, initial production 160 bbls. per hour through open tubing, total depth 3,779 feet. Humble Oil & Refining Co.'s No. 45 L. D. Crim, location abandoned. Same company's No. 47 Crim, derrick abandoned. Same company's No. 2-B Sexton, top sand 3,645 feet, initial production 76 bbls. per hour through three-fourths inch tubing choke, total depth 3,725 feet.

McMahona & McCullough's No. 3 S. S. King, top sand 3,618 feet, initial production 87 bbls. in 30 minutes through 1-inch tubing choke, total depth 3,638 feet. Tidal Oil Co.'s No. 5 Nat Bean, top sand 3,577 feet, initial production 115 bbls. in 15 minutes through open tubing, total depth 3,635 feet. Wheelock & Collins' No. 3 Dick Wells, top sand 3,662 feet, initial production 165 bbls. per hour pinched, total depth 3,730 feet. Acme Oil Co.'s No. 1 M. L. Thompson, top sand 3,668 feet, initial production 125 bbls. per hour through open tubing, total depth 3,720 feet. T. C. Adams' No. 2 Arnold, top sand 3,659 feet, initial production 100 bbls. per hour through open tubing.

Arkansas Fuel Oil Co.'s No. 2 Ferguson, top sand 3,656 feet, initial production 100 bbls. per hour through open tubing, total depth 3,680 feet. Same company's No. 2 R. W. Wheelis, top sand 3,684 feet, initial production 75 bbls. per hour through open tubing, total depth 3,718 feet.

Blackwell Oil & Gas Co.'s No. 3 Moore, top sand 3,652 feet, initial production 150 bbls. per hour through open tubing, total depth 3,672 feet. British-American's No. 2 Cooper, top sand 3,603 feet, initial production 152 bbls. per hour through open tubing, total depth 3,627 feet. British-American's No. 1-B Kangerga, top sand 3,630 feet, initial production 165 bbls. per hour through open tubing, total depth 3,654 feet. Jim Cloud's No. 4 Stone, top sand 3,666 feet, initial production 150 bbls. per hour through open tubing, total depth 3,708 feet.

Golding & Murchinson's No. 4 Blackwell, top sand 3,632 feet, initial production 150 bbls. per hour through open tubing, total depth 3,650 feet. Grayburg Oil Co.'s No. 1 Kangerga, top sand 3,645 feet, initial production 105 bbls. per hour through 1-inch tubing choke, total depth 3,670 feet. Gulf Production Co.'s No. 1-C Mayfield, top sand 3,661 feet, initial production 130 bbls. per hour through three-fourths-inch tubing choke, total depth 3,671 feet. Same company's No. 3 L. P. Thraw, top sand 3,709 feet, initial production 90 bbls. per hour through three-fourths-inch tubing choke, total depth 3,724 feet.

Humble Oil & Refining Co.'s No. 10 Blackwell, temporarily abandoned. Same company's No. 2 J. D. Florey, top sand 3,726 feet, initial production 86 bbls. per hour through three-fourths-inch tubing choke, total depth 3,735 feet. Same company's No. 4 J. E. Glover, top sand 3,730 feet, initial production 99 bbls. per hour through three-fourths-inch tubing choke, total depth 3,814 feet. Same company's No. 1 J. J. Pitner, top sand 3,690 feet, initial production 116 bbls. per hour through three-fourths-inch tubing choke, total depth 3,722 feet. Same company's No. 11 Plowman, top sand 3,695 feet, initial production 75 bbls. per hour through three-fourths-inch tubing choke, total depth 3,726 feet. Same company's No. 17 Plowman, temporarily abandoned. Same company's No. 3 Thompson, top sand 3,710 feet, initial production 120 bbls. per hour through three-fourths-inch tubing choke, total depth 3,715 feet. H. L. Hunt's No. 6 Calvin Young, top sand 3,665 feet, initial production 155 bbls. per hour through open tubing, total depth 3,710 feet. E. W. Jones' No. 2 W. P. Moore, top sand 3,638 feet, initial production 150 bbls. per hour through open tubing, total depth 3,663 feet.

Mid-Kansas Oil & Gas Co.'s No. 1 Kangerga, top sand 3,630 feet, initial production 147 bbls. per hour open, total depth 3,635 feet. Same company's No. 1 Will Rollins, top sand 3,637 feet, initial production 230 bbls. per hour through 2½-inch tubing, total depth 3,656 feet. Same company's No. 2 M. L. Thompson, top sand 3,626 feet, initial production 195 bbls. per hour through 2½-inch tubing, total depth 3,762 feet. Navarro Oil Co.'s No. 1 C. Young, top sand 3,726 feet, initial production 130 bbls. per hour through 1¼-inch tubing choke, total depth 3,762 feet.

Rubin & Weisman's No. 1-A Keeling, top sand 3,737 feet, initial production 156 bbls. per hour through open tubing, total depth 3,733 feet. Sinclair Oil & Gas Co.'s No. 6 F. B. Wilson, top sand 3,634 feet, initial production 165 bbls. per hour through open tubing, total depth 3,647 feet. Sombar Oil Co.'s No. 1 A. P. Finney, top sand 3,635 feet, initial production 100 bbls. per hour through three-fourths-inch tubing choke, total depth 3,710 feet. Stanolind Oil & Gas Co.'s No. 2-B Horace Schuler, top sand 3,635 feet, initial production 57 bbls. per hour through open tubing, total depth 3,688 feet. Sun Oil Co.'s No. 4 O. W. Knight, top sand 3,612 feet, initial production 15 bbls. in 10 minutes through open tubing, total depth 3,627 feet. Same company's No. 2 R. G. Mason, top sand 3,615 feet, initial production 120 bbls. per hour through open tubing, total depth 3,673 feet.

The Texas Company's No. 1 J. W. Turner, top sand 3,712 feet, initial production 60 bbls. per hour through 1-inch tubing choke, total depth 3,790 feet. Vitek Interest's No. 1 Mrs. J. R. Irion, abandoned, total depth 1,200 feet. Woodley Petroleum Corp.'s No. 1 McMillan, top sand 3,736 feet, initial production 120 bbls. per hour through 2½-inch tubing choke, total depth 3,750 feet.

Smith County

Humble Oil & Refining Co.'s No. 3 M. C. Thompson, derrick abandoned. M. M. Rowan and others' No. 1 Gibbons, dry and abandoned, total depth 3,610 feet.

Upshur County

Alma Petroleum Co.'s No. 1 J. B. Watson, top sand 3,633 feet, initial production 120 bbls. per hour through open tubing, total depth 3,676 feet. Cal Petroleum Corp.'s No. 2 Dearing, top sand 3,642 feet, initial production 70 bbls. per hour through 1-inch tubing choke, total depth 3,680 feet. Cal Petroleum Corp.'s No. 1 Walker, top sand 3,596 feet, initial production 75 bbls. per hour through 1-inch tubing choke, total depth 3,640 feet. Deaner & Bierson's No. 1 Victory, top sand 3,620 feet, initial production 37 bbls. in 15 minutes through three-fourths-inch tubing choke, total depth 3,630 feet.

Upshur County

Granite Oil Trust Co.'s No. 1 Victory (formerly M. E. Bogle), top sand 3,656 feet, initial production estimated 100 bbls. per hour through various chokes, total depth 3,672 feet. Henslow and others' No. 1 L. S. Taylor, location abandoned. Humble Oil & Refining Co.'s No. 5 D. W. Holland, top sand 3,570 feet, initial production 85 bbls. per hour through three-fourth-inch tubing choke, total depth 3,594 feet. Magnolia Petroleum Co.'s No. 3 Adkins, top sand 3,684 feet, initial production 100 bbls. per hour through 1-inch tubing choke, total depth 3,695 feet. Mudge Oil Co.'s No. 3 Free, top sand 3,720 feet, initial production 190 bbls. per hour through tubing, total depth 3,743 feet. Osteen and others' No. 1 O. F. Smith, top sand 3,648 feet, initial production 77 bbls. in 15 minutes through open tubing, total depth 3,664 feet.

Wood County

Wood County Development Co.'s No. 1 Rick, dry and abandoned, total depth 2,008 feet.

COMPLETIONS IN EAST CENTRAL TEXAS

Gregg County

Adams and Lyles' No. 1 Taylor, Anderson, top sand 3,483 feet, initial production 165 bbls. in 15 hours through 1-inch tubing choke, total depth 3,508 feet. Amerada Petroleum Corp.'s No. 1 J. P. Freeman, top sand 3,672 feet, initial production 120 bbls. per hour through 1-inch tubing choke, total depth 3,700 feet. Same corporation's No. 1 McPierson, top sand 3,563 feet, initial production 30 bbls. in 30 minutes through 1-inch tubing choke, total depth 3,588 feet. Arkansas Fuel Oil Co.'s No. 2 Clements, top sand 3,614 feet, initial production 76 bbls. in 30 minutes through tubing, total depth 3,632 feet. Same company's No. 2-A Harrison, top sand 3,567 feet, initial production 71 bbls. in 30 minutes through tubing, total depth 3,577 feet. Same company's No. 2 Heston, top sand 3,611 feet, initial production 95 bbls. in one-half hour through tubing, total depth 3,633 feet. Same company's No. 6-A Lathrop, top sand 3,569 feet, initial production 75 bbls. in 30 minutes through tubing, total depth 3,682 feet. Same company's No. 7-A Lathrop, top sand 3,560 feet, initial production 44 bbls. in 30 minutes through tubing, total depth 3,576 feet. Atlantic Oil & Production Co.'s No. 1 J. J. Fuller, top sand 3,687 feet, initial production 160 bbls. per hour through tubing, total depth 3,740 feet. Same company's No. 2 Fuller, top sand 3,672 feet, initial production 190 bbls. per hour through tubing, total depth 3,695 feet. Atlantic and Sun Oil Co.'s No. 2 Hays, top sand 3,494 feet, initial production 195 bbls. per hour through tubing, total depth 3,523 feet.

Columbia Oil & Gas Co.'s No. 1 J. G. McGrede, top sand 3,583 feet, initial production 112 bbls. per hour through 1-inch tubing choke, total depth 3,600 feet. Cranfill & Reynolds' No. 2 McGrede, top sand 3,627 feet, initial production 300 bbls. per hour through tubing, total depth 3,646 feet. Dillard Oil Co.'s No. 3 W. E. Jones, top sand 3,632 feet, initial production 160 bbls. per hour through 1-inch tubing choke, total depth 3,655 feet.

Empire Gas & Fuel Co.'s No. 2 Joe Bender, top sand 3,570 feet, initial production 143 bbls. per hour through three-quarters-inch tubing choke, total depth 3,581 feet. Same company's No. 1 L. A. Jeter, top sand 3,536 feet, initial production 185 bbls. in 45 minutes through tubing, total depth 3,565 feet. Same company's No. 1 Lee, top sand 3,523 feet, initial production 110 bbls. in 30 minutes through tubing, total depth 3,570 feet. Same company's No. 3 Rogers, top sand 3,552 feet, initial production 135 bbls. in 35 minutes through tubing, total depth 3,604 feet. Flavey and others' No. 2 fee, top sand 3,684 feet, initial production 150 bbls. per hour through tubing, total depth 3,705 feet.

Galvex Oil Corp.'s No. 1 M. O. Sheppard, top sand 3,548 feet, initial production 155 bbls. in 35 minutes through tubing, total depth 3,578 feet. W. B. Glasscock's No. 1 P. B. Harris, location abandoned. Gulf Production Co.'s No. 1 Fonville, top sand 3,539 feet, initial production 130 bbls. per hour through three-quarters-inch tubing choke, total depth 3,550 feet. Same company's No. 3 Neely, top sand 3,507 feet, initial production 192 bbls. in 1 hour and 30 minutes through three-quarters-inch tubing choke, total depth 3,528 feet.

Humble Oil & Refining Co.'s No. 4 Carter, top sand 3,579 feet, initial production 94 bbls. per hour through three-quarters-inch tubing choke, total depth 3,631 feet. Leonard Petroleum Co.'s No. 4 Rose Corbin, top sand 3,568 feet, initial production 110 bbls. per hour through three-quarters-inch tubing choke, total depth 3,593 feet. Lucy Petroleum Co.'s No. 1 McLee Fisher, top sand 3,527 feet, initial production 126 bbls. per hour through eleven-sixteenths-inch tubing choke. total depth 3,552 feet.

Magnolia Petroleum Co.'s No. 7 Everett, top sand 3,675 feet, initial production 200 bbls. per hour through 1-inch tubing choke, total depth 3,681 feet. Same company's No. 4 Jones, top sand 3,651 feet, initial production 140 bbls. per hour through 1-inch tubing choke, total depth 3,663 feet.

Mosely estate's No. 2 B. M. Miles, top sand 3,450 feet, initial production 75 bbls. pinched through tubing, total depth 3,470 feet. Roeser & Pendleton's No. 3 Rodden, top sand 3,562 feet, initial production 196 bbls. per hour through tubing, total depth 3,582 feet. F. J. Simmon's No. 1 Jackson, top sand 3,871 feet, initial production 100 bbls. per hour through various chokes, total depth 3,877 feet.

Stanolind Oil & Gas Co. and Simms Oil Co.'s No. 2 Fonville, top sand 3,522 feet, initial production 100 bbls. in 30 minutes through open tubing, total depth 3,568 feet. Sun Oil Co.'s No. 4 J. W. Akin, top sand 3,535 feet, initial production 173 bbls. per hour through 2-inch flow line, total depth 3,578 feet. Same company' No. 4 Tate, top sand 3,510 feet,

initial production 120 bbls. per hour through 1-inch tubing choke, total depth 3,529 feet. Superior Oil Co.'s No. 1-A Prichard, top sand 3,512 feet, initial production 100 bbls. per hour through various chokes, total depth 3,523 feet.

W. C. Turnbow's No. 1 J. C. McKinley, top sand 3,618 feet, initial production 110 bbls. per hour through various chokes, total depth 3,654 feet. Vacuum Oil Co.'s No. 2 Beavers, top sand 3,525 feet, initial production 226 bbls. per hour through tubing, total depth 3,535 feet. Virginia Oil Co.'s No. 1 J. B. Harris, top sand 3,507 feet, initial production 100 bbls. in 30 minutes through one-half-inch tubing choke, total depth 3,516 feet. Yount Lee Oil Co.'s No. 1 J. Flemster, top sand 3,563 feet, initial production 78 bbls. per hour through eleven-sixteenths-inch tubing choke, total depth 3,583 feet.

Atlantic and Byrd-Frost's No. 2 Huey, top sand 3,547 feet, initial production estimated 200 bbls. per hour through open tubing, total depth 3,577 feet. Atlantic and Byrd-Frost's No. 3 Whaley, top sand 3,637 feet, initial production 123 bbls. per hour through three-quarters-inch tubing choke, total depth 3,642 feet. Golding and Murchison's No. 4 Griffin, top sand 3,564 feet, initial production estimated 200 bbls. per hour through open tubing, total depth 3,600 feet. Golding and Murchinson's No. 2 S. Smith, top sand 3,665 feet, initial production 185 bbls. per hour through 1-inch tubing choke, total depth 3,676 feet.

Gulf Production Co.'s No. 3 M. T. Cole, top sand 3,536 feet, initial production 164 bbls. per hour through open tubing, total depth 3,547 feet. Same company's No. 3 Alexander, top sand 3,541 feet, initial production 190 bbls. per hour through open tubing, total depth 3,561 feet. Same company's No. 6 Ben Watson, top sand 3,561 feet, initial production 120 bbls. per hour through three-quarters-inch tubing choke, total depth 3,585 feet. Humble Oil & Refining Co.'s No. 15-B S. S. Laird, top sand 3,565 feet, initial production 32 bbls. first hour through three-quarters-inch tubing choke, total depth 3,630 feet. Invincible Oil Co.'s No. 1 M. J. Register, top sand 3,547 feet, initial production 200 bbls. per hour through open tubing, total depth 3,566 feet. Knox and others' (formerly Thompson) No. 1 Clayton heirs, top sand 3,519 feet, initial production 185 bbls. per hour through open tubing, total depth 3,536 feet.

Magnolia Petroleum Co.'s No. 4 M. A. Griffin, top sand 3,550 feet, initial production 125 bbls. per hour through three-quarters-inch tubing choke, total depth 3,578 feet. Same company's No. 4 Ben Laird, top sand 3,580 feet, initial production 160 bbls. first hour and 15 minutes through three-quarters-inch tubing choke, total depth 3,592 feet. Prairie Oil & Gas Co.'s No. 2 Walker, top sand 3,680 feet, initial production 106 bbls. per hour through three-quarters-inch tubing choke, total depth 3,684 feet.

Shell Petroleum Corp.'s No. 3 Bivens, top sand 3,575 feet, initial production 214 bbls. per hour through open tubing, total depth 3,604 feet. Same corporation's No. 3 J. B. King, top sand 3,657 feet, initial production 185 bbls. per hour pinched, total depth 3,659 feet. Same corporation's No. 5 Knowles, top sand 3,634 feet, initial production 179 bbls. per hour through open tubing, total depth 3,635 feet. Same corporation's No. 2 Williams and Bonner, top sand 3,554 feet, initial production 100 bbls. per hour through three-quarters-inch tubing choke, total depth 3,620 feet.

Sun Oil Co.'s No. 10 Hilburn, top sand 3,681 feet, initial production 93 bbls. per hour through three-quarters-inch tubing choke, total depth 3,691 feet. The Texas Company's No. 4 W. Davis, top sand 3,518 feet, initial production 162 bbls. per hour through 1-inch tubing choke, total depth 3,575 feet. The Texas Company's No. 5 H. T. Elder, top sand 3,613 feet, initial production 107 bbls. per hour through three-quarters-inch tubing choke, total depth 3,645 feet. Ray L. Martin's No. 1 Dickerson, top sand 3,550 feet, initial production estimated 100 bbls. per hour through tubing, total depth 3,600 feet. Whittle and Cavanaugh's No. 1 Rose Brown, location abandoned.

Houston County

Porter's No. 5 Doug Austin, location abandoned.

Rusk County

Abercrombie and Harrison's top sand 3,657 feet, initial production 165 bbls. per hour pinched, total depth 3,684 feet. Dink Oil Co.'s (formerly California Movie Stars') No. 1 A. Givens, top sand 3,610 feet, initial production 225 bbls. per hour through open tubing, total depth 3,642 feet. Tip DeArman's No. 1 King, top sand 3,685 feet, initial production 185 bbls. per hour pinched, total depth 3,730 feet. Devonian Oil Co.'s No. 6 R. A. Motley, top sand 3,701 feet, initial production 110 bbls. per hour through three-quarters-inch tubing choke, total depth 3,710 feet. East Texas Refining Co.'s No. 1 Moses Mayfield, top sand 3,670 feet, initial production 185 bbls. per day, pumping, total depth 3,730 feet.

Gulf Production Co.'s No. 5 Brightwell, top sand 3,623 feet, initial production 150 bbls. per hour through tubing, total depth 3,641 feet. Same company's No. 1-B C. E. Christian, top sand 3,627 feet, initial production 70 bbls. per hour through three-quarters-inch tubing choke, total depth 3,634 feet. Same company's No. 3 Laird, top sand 3,586 feet, initial production 82 bbls. per hour through three-quarters-inch tubing choke, total depth 3,594 feet. Same company's No. 1 Morris, top sand 3,645 feet, initial production 82 bbls. per hour through three-quarters-inch tubing choke, total depth 3,648 feet.

Humble Oil & Refining Co.'s No. 37 L. D. Crim, top sand 3,594 feet, initial production 69 bbls. first hour through three-quarters-inch tubing choke, total depth 3,629 feet. Same company's No. 14 Peterson, top sand 3,580 feet, initial production 80 bbls. per hour through three-quarters-inch tubing choke, total depth 3,607 feet. Same company's No. 3-A H. Sexton, top sand 3,751 feet, initial production 108 bbls. per hour through three-quarters-inch tubing choke, total depth 3,766 feet.

Magnolia Petroleum Co.'s No. 1 Mrs. A. A. Johnson, top sand 3,680 feet, initial production 121 bbls. first 18 minutes through 4-inch tubing choke, total depth 3,686 feet. Same company's No. 5 Dick Wells, initial production 185 bbls. in six hours pumping, total depth 3,712 feet. D. G. Oliphant Co.'s No. 1 Powers, top sand 3,811 feet, initial production 12 bbls. per hour through open casing, total depth 3,814 feet. Patterson Drilling Co.'s No. 1 Brock, top sand 3,635 feet, initial production 37 bbls. first 15 minutes through open 1-inch tubing choke, total depth 3,649 feet.

Shell Petroleum Corp.'s No. 3 J. X. Spivey, top sand 3,693 feet, initial production 214 bbls. per hour through open tubing, total depth 3,766 feet. Stanolind Oil & Gas Co.'s No. 3 C. O. Christian, location temporarily abandoned. Same company's No. 3 M. R. Terrell, location temporarily abandoned. Same company's No. 4 C. O. Christian, temporarily abandoned location. Robert and Walton's No. 2 C. E. Christian, location abandoned.

British-American's No. 4 J. S. Stone, top sand 3,640 feet, initial production 175 bbls. per hour through open tubing, total depth 3,663 feet. Depoil's No. 1-B M. M. Barksdale, top sand 3,702 feet, initial production 200 bbls. per hour through open tubing, total depth 3,705 feet. East Texas Refining Co.'s No. 2 M. O'Quinn, top sand 3,818 feet, initial production 175 bbls. per hour through open tubing, total depth 3,825 feet.

Golding and Murchinson's No. 3 Blackwell, top sand 3,666 feet, initial production 160 bbls. per hour through open tubing, total depth 3,691 feet. Houseman and Walter's No. 1 Alford, top sand 3,797 feet, initial production 125 bbls. per hour through one-half-inch tubing choke, total depth 3,797 feet. Gulf Production Co.'s No. 6 Murphy, top sand 3,739 feet, initial production 90 bbls. per hour through three-quarters-inch tubing choke, total depth 3,751 feet. Same company's No. 2 Stone, top sand 3,638 feet, initial 85 bbls. per hour through three-quarters-inch tubing choke, total depth 3,648 feet.

Haynes Brothers' No. 2 Thrash, top sand 3,737 feet, initial production 175 bbls. per hour through open tubing, total depth 3,763 feet. John Hoosier's No. 1 L. J. Jones, top sand 3,751 feet, initial production 60 bbls. in 30 minutes through 1-inch tubing choke, total depth 3,768 feet.

Humble Oil & Refining Co.'s No. 9 Blackwell, top sand 3,682 feet, initial production 92 bbls. per hour through three-quarters-inch tubing choke, total depth 3,693 feet. Same company's No. 2 C. A. Brightwell, top sand 3,714 feet, initial production 61 bbls. per hour through three-quarters-inch tubing choke, total depth 3,783 feet. Same company's No. 5-A Ida Holt, top sand 3,670 feet, initial production 104 bbls. per hour through three-quarters-inch tubing choke, total depth 3,727 feet. Same company's No. 5 Milliken, top sand 3,637 feet, initial production 80 bbls. per hour through three-quarters-inch tubing choke, total depth 3,729 feet. Same company's No. 4 J. W. Turner, top sand 3,729 feet, initial production 30 bbls. per hour through three-quarters-inch tubing choke, total depth 3,807 feet. Same company's No. 5 J. W. Turner, top sand 3,717 feet, initial production 80 bbls. per hour through three-quarters-inch tubing choke, total depth 3,786 feet. Same company's No. 2 T. M. Wooley, top sand 3,662 feet, initial production 150 bbls. per hour through three-quarters-inch tubing choke, total depth 3,710 feet. H. L. Hunt's No. 2 Smith, location abandoned.

T. A. Johnson's No. 1, top sand 3,818 feet, initial production 200 bbls. per hour through open tubing, total depth 3,821 feet. Russell and Terrell's No. 1 Deason, top sand 3,682 feet, initial production 100 bbls. per hour through open tubing, total depth 3,815 feet. Mid-Kansas Oil & Gas Co.'s No. 1 Cora L. Graves, top sand 3,570 feet, initial production 72 bbls. in 30 minutes through open tubing, total depth 3,645 feet. Same company's No. 2 R. G. Mason, top sand 3,632 feet, initial production 110 bbls. per hour through 1-inch tubing choke, total depth 3,650 feet. Same company's No. 3 E. E. Moore, top sand 3,607 feet, initial production 110 bbls. per hour through open tubing, total depth 3,645 feet. Owenwood Oil Co.'s No. 3 Willis, top sand 3,732 feet, initial production 163 bbls. per hour through open tubing, total depth 3,749 feet. R. M. V. Oil Co.'s No. 4 Bridwell, top sand 3,694 feet, initial production 185 bbls. pinched through 3-inch flow line, total depth 3,623 feet. W. H. Rowe's No. 1 Deason, top sand 3,655 feet, initial production 100 bbls. per hour through open tubing, total depth 3,694 feet.

Stanolind Oil & Gas Co.'s No. 1-A Horace Schuler, top sand 3,626 feet, initial production 116 bbls. per hour through open tubing, total depth 3,693 feet. Carl G. Willie's (formerly White and Wiley) No. 1 Joe Lee, top sand 3,775 feet, initial production 200 bbls. per hour through open tubing, total depth 3,794 feet. Campbell Oil Co.'s No. 1 Compton, dry and abandoned.

Smith County

Arcadia Refining Co.'s No. 1 J. H. Green, top sand 3,750 feet, initial production 175 bbls. per hour through open tubing, total depth 3,761 feet. Magnolia Petroleum Co.'s No. 10 J. R. Wright, top sand 3,651 feet, initial production 555 bbls. per hour through open casing and tubing, total depth 3,683 feet. Sinclair Oil & Gas Co.'s No. 3 Dora Wright, top sand 3,765 feet, initial production 180 bbls. per hour through open tubing, total depth 3,768 feet. Simms Oil Co.'s No. 3 J. D. Henson, top sand 3,671 feet, initial production 180 bbls. per hour through open tubing, total depth 3,676 feet. Phillips and Phillips' No. 1 A. Morrison, location abandoned.

Upshur County

Cranfill & Reynolds' No. 3 Porter, top sand 3,678 feet, initial production 37 bbls. in 15 minutes through tubing, total depth 3,696 feet. Humble Oil & Refining Co.'s No. 1 G. W. Johnson, top sand 3,677 feet, initial production estimated 70 bbls. per hour through three-quarters-inch tubing choke, total depth 3,712 feet. Same company's No. 3 G. W. Johnson, top sand 3,687 feet, initial production 85 bbls. in 1½ hours, total depth 3,716 feet. Same company's No. 1 J. T. Miller, initial production 28 bbls. per hour through three-quarters-inch tubing choke, total depth 3,744 feet. Same company's No. 1-C Etta O'Byrne, top sand 3,725 feet, initial production 22 bbls. in 2 hours through three-quarters-inch tubing choke, total depth 3,735 feet.

Magnolia Petroleum Co.'s No. 1 N. W. Blackwell, top sand 3,641 feet, initial production 160 bbls. per hour through 1-inch tubing choke, total depth 3,645 feet. Shell Petroleum Corp.'s No. 4 C. C. Landers, top sand 3,659 feet, initial production 120 bbls. per hour through various chokes, total depth 3,662 feet. Sun Oil Co.'s No. 1 D. J. Watkins, top sand 3,664 feet, initial production 200 bbls. of salt water, top Pecan Gap 2,590 feet, base Pecan Gap 3,004 feet, top Austin chalk 3,588 feet, base Austin chalk 3,628 feet, abandoned. Sun Oil Co.'s No. 2 Watkins, top sand 3,680 feet, initial production 85 bbls. in 12 hours through tubing, total depth 3,702 feet. Harry Wilson's No. 1 J. C. Wileford, dry and abandoned, total depth 3,803 feet, top Pecan Gap 2,624 feet, base Pecan Gap 2,975 feet, top Austin chalk 3,680 feet, top sand 3,780 feet.

THE OIL MAN'S CALENDAR

OCTOBER

29-30 — Roanoke, Va., Virginia Oil Men's Association, Patrick Henry Hotel.

NOVEMBER

6-7—Seattle, Wash., second annual convention, Northwest Oil and Gas Association.

10—Chicago, Ill., Oil States Advisory Committee.

10-12—Chicago, Ill., twelfth annual meeting, American Petroleum Institute, Stevens Hotel.

16-21—Pittsburgh, Pa., third International Conference on Bituminous Coal, Carnegie Institute.

30-Dec. 4—New York, N. Y., annual meeting, American Society of Mechanical Engineers.

DECEMBER

2-3—Indianapolis, Ind., Indiana Petroleum Association, Hotel Severin.

7-12—Atlantic City, N. J., trade show, motor and equipment—National Standard Parts Association.

9-11—Atlantic City, N. J., American Institute of Chemical Engineers.

9-11 — Omaha, Neb., Nebraska Petroleum Marketers, Hotel Paxton.

28-31—Tulsa, Okla., Geological Society of America, Mayo Hotel.

1932

JANUARY

9-15—Detroit, Mich., convention and road show, American Road Builders' Association, Airport Building.

9-16—New York, National Automobile Show.

11-12—Fargo, N. D., North Dakota Division, Northwest Petroleum Association, Waldorf Hotel.

25-29 — Detroit, Mich., annual meeting, Society of Automotive Engineers.

30-Feb. 6—Chicago, Ill., National Automobile Show.

FEBRUARY

9 — Louisville, Ky., Kentucky Petroleum Marketers Association, Brown Hotel.

MARCH

17-19 — Oklahoma City, Okla., American Association of Petroleum Geologists.

APRIL

11-16—Boston, Mass., ninth annual convention, American Oil Burner Association.

21-22—Cleveland, Ohio, semiannual meeting, National Petroleum Association, Hotel Cleveland.

GET INTO THE FIELD OF BIGGER PROFITS *with the* GUIBERSON BOOSTER PUMP

1. A BALANCED UNIT. By utilizing weight of rods below Booster Pump to displace fluid on downward stroke, rods are always under tension, as in upward stroke. Shock-absorbing result makes pump a well-balanced unit.

2. INCREASES LIFE OF RODS. Continuous stretching and contracting of rods, which cause practically all rod troubles, have been reduced to a minimum by keeping rods under tension on both downward and upward strokes.

3. INCREASES PRODUCTION. Downward stroke, as well as upward stroke, is made to lift oil. Rod tension on downward stroke acts as shock absorber, avoiding quick load stress at reversal of stroke. Length of stroke and number of strokes per minute may be increased materially, resulting in increased production.

4. INCREASES LIFE OF TUBING. Booster Pump provides tubing anchorage near center of string, reducing weaving motion and resultant wear. Constant rod tension also saves wear.

5. REDUCES WEIGHT OF WELL. Fluid is passed to casing above Booster Pump, relieving rods of this fluid weight, which is approximately 1½ pounds per foot in 2½" tubing. Booster Pump, being one-third of the way down, saves approximately 33⅓% in power consumed over the usual method of pumping.

The field of bigger profits is certainly what everybody is interested in. But it takes a boost to get there. The Guiberson Booster Pump gives it to you in a very novel way.

The Guiberson Booster Pump is like an auxiliary working barrel, set down approximately one-third of the depth of the well. Its function is to transfer and lift to the surface oil that is delivered to it by the regular working barrel, by means of the weight of the rods on the downward stroke. The enormous load from lifting the entire column of oil is thereby relieved. In effect, a deep well is made into a shallow well, for pumping. Note the many features which not only increase production but lower the cost of production at the same time.

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GUIBERSON
BETTER BE SAFE THAN SORRY

LEADERS IN AGREEMENT ON FUNDAMENTALS

(Continued from Page 15)

the guise of conserving gas. The real and assumed objectives may be related and equally meritorious, but they should be separated, and each should be made to stand on its own merits. If the great mass of participants is to be convinced, it must know where it is going, and why.

Results of Indirect Methods

Furthermore, indirect methods will frequently bring distorted results that defeat the program. Gas oil ratios applied to a pool might be a laudible effort to prevent waste in behalf of the public interest, but if it interferes with equitable distribution of the oil and gas, that is with its distribution in harmony with the popular conception of rights growing out of long-established practices of the industry, opposition will be aroused, and even defeat invited through adverse legal decision. In so far as is consistent with correcting the evils under consideration, all rights and privileges in any new program should coincide with rights and privileges that have been recognized throughout the history of the industry up to this time. Popular conception does not favor legalized piracy, and will not oppose a just restriction that prevents it.

These and other illustrations might be cited as types of proposals that should not become part of any program to correct the industry's difficulties.

Character of Program

What character of program, then, might be proposed with hope that it would ultimately receive united support from all interested groups after its provisions became understood by them?

If the opinion expressed by those listed herein can be taken as a proper criterion, then it appears to the writer that an address which recently came to his attention might be quoted to advantage at some length in this analysis because it reflects impressions that are widely held. It contained proposals that would arouse instant and continued opposition. On the other hand, it contained much that would be accepted by all.

The address was made by Warner Clark, assistant general manager of production, Standard Oil Co. of California, and delivered at the mid-year meeting of the A.P.I. Division of Production at Dallas. The entire address deserves the careful reading of every student of this problem. It breathes a spirit of responsibility on the part of industry toward society and labor that does not accord with the popular conception imputed to those affiliated with large aggregations of capital. However, the writer finds that it sets forth in a striking manner a common note that runs through many of the interviews above mentioned. No quotation, however, can do justice to the paper itself.

Address of Mr. Clark

Mr. Clark, in a fanciful manner, was looking at the industry from the vantage point of one hundreds years later and states:

"I am presenting this paper from the possible viewpoint of 2031, harboring the thought that by so doing we may for a moment see our actions today as a century hence others may see us."

After describing the difficulties then being experienced because of the relative high cost and scarcity of mobile power, he continues:

"We are prone to heap profuse maledictions on the heads of the men who were responsible for the policies of the oil industry in the first half of the twentieth century—those men whose actions in turn were responsible for the introduction of government ownership and its attendant maladjustments. The universal outcry, with the similarly universal implication, that the petroleum executives of 1928-50 were blind, stupid, and vicious, deserves no little modification. Perhaps, judging their actions in the aggregate and in the light of present conditions, these accusations are not without an element of justice. I'll admit that the waste they effected was little short of criminal, but to presume that each man among them harbored malicious antisocial intentions is not correct. It may be fair to call them 'power brigands'; but to decry the calamities from which we suffer, and then to settle back with the smug assumption that in being vituperative we have been constructive, is futile. We have assumed that since they understood proration of outlet, they wilfully threw away the opportunity to curtail production, and became wasteful as a matter of choice; but I am far from certain that this is true. Furthermore, it is useless to criticize their specific performance without considering the general social and economic problems with which they were faced. We have been inclined to overlook these problems; and, after reviewing the situation, I think that perhaps they overlooked them also. In making this study of the petroleum industry under private ownership, I have sought to outline the various factors which caused it to end in a fiasco of material waste and of economic disaster."

Industry Confused

Here follows a graphic description of the underlying causes of this situation, and then continues:

"Evidently the main difficulty was the confusion which existed in the minds of those engaged in the controversy, and this confusion was characteristic of the age. Whether those who discussed the subject were too lazy to look up the facts, or whether the facts were so disseminated that it was difficult to obtain them, or whether they so loved to write and talk that they wrote and talked first and thought afterwards, if at all, is uncertain. On problems concerning the oil industry, it seems that those who entered into their verbal solution most vociferously were so ill acquainted with their subject that their discussions were inaccurate and inconclusive.

"It is easy to see that those in control of the oil industry in 193 found themselves resting on, and culturing, anything but a bed of roses. And, although those executives of oil companies are foolishly abused for intentionally and maliciously depleting the world of its resources during the twentieth century, they are, nevertheless, open to a great deal of just criticism. They are to be criticised, not because they were evil-intentioned or sought to destroy for pleasure, but because they did not allow the industry to wreck itself; they are to be blamed for their lack of any concern for the future in their unwillingness to forego immediate gains, partly because of the tremendous problems which confronted them—but they are to be reproached primarily because they refused to institute a leadership and combine their common energies behind that leadership. * * *

"When we sum up the elements in the situation, we find they were:

"1. The oil industry dealt in a commodity which was a limited national resource, and as such was a social entity and of national concern.

"2. The unfortunate condition of the industry which sought to produce this limited resource was due to the location of so much of the crude being revealed all at once, that a generous portion of the world's reserve was dumped on the market without regard to the market's consumptive capacity.

"3. Consequently, the problem before the industry, which was of general social concern, was so to produce and sell this resource that the sensible economic utilization of every fractional part of the power contained in it would be realized.

"What should have been done was:

"1. To recognize that despite the private rights present in the control of the petroleum, there was owing to the nation and to society the duty of defending the oil against physical waste and wasteful misuse.

"2. With this hypothesis as a basis, the oil industry and the various government agencies should have co-ordinated their efforts so as to:

"a. Protect the reserves contributary to small wells from annihilation, which would likewise have defended the capital investment in these wells from confiscation.

"b. Protect positively, as far as was physically possible, oil sands from unnecessary flooding with water; but once these sands became inescapably flooded, to have given their production right-of-way over all other in order that the remaining oil could have been rescued.

"c. Force *flush fields and flush wells* to curtail their production to normal industrial demands."

This in a sense represents the ideal toward which those who are not satisfied with the present order look with constructive vision.

Naturally the road over which the industry must travel from the condition in which it found itself as the result of a half century of anti-social methods until it reaches the place where it can serve society well and thereby serve itself is a long and arduous one. In an industry so vast such a radical change cannot be made in a short period of time nor without great effort. It is now attempting to make the change but, although several years have transpired, it has not got much beyond the point where it sees clearly the objective and a few of the details of the road over which it must travel.

While to those who are passing over it the progress seems discouragingly slow and fraught with many hardships, yet perhaps more advance has been made than is apparent, for the most difficult part of any such transition is breaking away from the old order and heading directly toward the new. Great masses move slowly, but they move inexorably, and real progress is made when they are headed in the right direction, which the industry now appears to be. Perhaps the time element will not be so long until that objective described by Mr. Clark is reached, for some one has well said, "Nothing is more powerful than an idea when its hour has come." The process is simple and, except for the human element, the change could figuratively come overnight for it needs little more than a definite change in legal status. Standards of ownership need to be defined and also the legal right of society to control its surplus. This could be done within a period of months by legislative enactment, or it might require many years by the slow evolution of judicial decisions. Which it shall be appears to lie in the laps of the gods. Their mills grind slowly, but they grind to powder.

It is but natural in this great transition mistakes will be made that delay progress. Most all of them have been made that are described in a former part of this paper as things that should not be done but they eventually correct themselves. The time element until the objective described by Mr. Clark is reached is dependent upon opposition encountered en route.

Opposition Is Useful

While opposition is sometimes frowned upon it serves a useful purpose in that it discovers mistakes and is not permanently injurious unless it actually defeats the objective or causes unwise compromises to be made. Unless these occur, opposition to a limited degree is a blessing in disguise, for it serves to make the result a sounder product. We shall attempt to segregate these potential blessings. They range through the entire gamut of human motives.

First, then, is the fraudulent stock selling promoter, who utilizes the glamour of the oil industry merely as the basis for defrauding his ignorant and credulous fellow men. He secures sufficient room on which to locate a rig over a prolific pool. The legal right he enjoys under the old system, so strenuously defended by its friends, to drill into a prolific pool and extract unregulated quantities from the common reservoir, serves as the basis of his fantastic tales to gather in the savings of simple, trusting folks. The loathing with which he is regarded is dependent upon the class of people he preys upon rather than the hindrance he is to efficient oil field development, but he has been no small factor in speeding up the demoralization of the oil industry. His perpetuation depends upon continuance of the old order.

Second in the opposition to changing methods and, on a somewhat higher scale perhaps, is the individual who is confident of his ability to survive when the rules of the game are rough and who finds his greatest opportunity in chaotic condition and the misfortunes of his fellow men by picking up choice bargains in properties or oil. He is confined to no class financially, but ranges from the individual who wishes to buy five acres up to the corporation that could buy five states.

A third class of opposition that is rapidly dwindling, however, arises out of quite different motives, but is due to lack of vision and understanding. The individual of that class has been accustomed to certain methods and practices and because they have always existed, in so far as he is concerned, he believes they must be right. He does not know what it is all about and because he is suffering under the economic pressure vaguely feels it must be some bigger fellow doing something to him, not realizing the "big fellows" are suffering like he is out of the condition his opposition helps to perpetuate. This class is rapidly dwindling. Five years ago it comprised all of us, but the experience of the five years has converted most of us.

These three classes of opposition are simple of solution. Government is organized to take care of the first two and the third responds to education.

Old Order Is Passing

A fourth class of opposition that is more serious because it has certain inherent merits originates with those who clearly see the mistakes and dangers in the new order that during the transition stage are especially prevalent. Because it cannot arise like Minerva full fledged they oppose it with much confidence they can survive under a perpetuation of the old system. However, the old order is passing. It might be deflected or retarded, but it cannot be stopped for it operates under economic forces beyond the control of individuals to stop. But this fourth class will conform as sincerely to the new order when it arrives as they did to the old. Their influence will be felt in its shaping. They view it with critical eye and will find its weaknesses. It will be better for their opposition, provided eventually as its weaknesses disappear they will join with its proponents in shaping it to the best interests of society.

The task of the industry is to reconcile these two viewpoints, that is, the one looking toward the ideal described by Mr. Clark and this fourth class of opposition above set forth. Both have merit and, no doubt, both have weaknesses. The first must be found and the last discarded in both programs so that the industry can go forward behind a united front in the effort to serve society before permanent stability may be expected.

GOVERNMENT GIVES PRELIMINARY DATA

(Continued from Page 90)

weighed. A rough check of the amount of light oil obtained is made by recovering the light oil from the solvent by distillation. After the total weight of tar in the precipitator is ascertained, the soluble material is washed out with chloroform through a fritted glass crucible, leaving any carbon present in the tar as a residue. This residue, added to such carbon as can be removed from the reaction tube, gives an approximation of the total weight of carbon formed. Such a determination is rather inaccurate, and the results are always somewhat low, especially if much carbon is formed.

Conclusions

The data obtained in this investigation, which have been presented in tabular and graphic form, point to certain general conclusions which give further evidence of the commercial application of the method of pyrogenic synthesis of gaseous, liquid, and solid hydrocarbons from methane. No attempt has been made to compare the results with those of other investigators because the data are not on a comparative experimental basis, and because there are some contradictory results concerning which the authors wish more confirmation. Nevertheless, the following seven items are given as the present findings of major importance:

1. The pyrolysis of methane yields (exclusive of carbon and hydrogen) higher hydrocarbons, among which the following have been identified: Ethylene, acetylene, benzene, naphthalene, anthracene and pyrene. Besides ethylene and acetylene, other gases are produced in small amounts, among which methyl acetylene is suspected. There are also formed unsaturated liquids boiling below and above benzene, and liquids and solids of very high boiling point, presumably high in carbon content.

2. The yields of these products obtained from methane at amsopheric pressure depend on the temperature and rate of flow through the cracking zone assuming other factors equal. However, an increase in duration of heating is not equivalent in all respect to an increase in temperature.

3. Ethylene appears to be the dominant factor at the beginning of the pyrolysis, the other hydrocarbons being formed subsequently; but it is impossible to determine yet whether the light oil proceeds from ethylene or acetylene.

4. Dilution of the gas with either nitrogen or hydrogen affects the yields, probably due primarily to heat transfer and polymerization. In addition, hydrogen decreases the yields due to suppression of the dissociation of methane. With both diluent gases the per cents of ethylene and acetylene in the total products are increased.

5. Ethane admixed with methane increases the yields of all products considerably.

6. Certain relationships between the yield and the variable factors of temperature and rate of flow have been found to exist which are shown graphically by isometric figures.

7. The optimum operating conditions may be approximated by a consideration of the rate and amount of production.

Further work is in progress to show more fully the effect of such factors as diameter, length, and material of tube; preheating of incoming gas; and subsequent treatment of the exit gas as it emerges from the cracking zone.

REFINERS WILL INSTALL MORE CRACKING UNITS

(Continued from Page 22)

and in fact the reverse is true and it will be necessary to establish a price differential of close to one-half cent between the 70 octane gasoline and the 60.

Above 70 octane number, it is the belief of some refiners, it will be more economical to add Ethyl fluid instead of attempting to make the fuel by present known methods. It is this fact that may induce the Ethyl Gasoline Corp. to permit the introduction of a second grade of Ethyl Gasoline in the United States, which it thus far has declined to do.

Credits Wayne-Dundee With 16 Billion Feet Natural Gas Content

By Special Correspondent

CORNING, N. Y., Oct. 24.—Frank Brewster, president of the Belmont Quadrangle Drilling Co., testified before the Public Service Commission at Albany yesterday that in his opinion the Wayne Field in Schuyler County held 4,500,000,000 cubic feet of gas and the Dundee Field in Yates County held 12,000,000,000 cubic feet of gas. Mr. Brewster's company holds 225,000 acres of leases in New York State and 75,000 acres on the Pennsylvania side of the New York-Penn gas field and has 13 producing gas wells in the Dundee-Wayne Field. He testified that the cost of taking the "sweet" gas from the Wayne Field was 27.59 cents per 1,000 cubic feet and that the cost of taking the "sour" gas from the Dundee Field was 21.14 cents per 1,000 feet. He said that one well permitted to flow wide open could supply the needs of the present consumers of gas from either field. The commission is compiling plans to compile complete date on the gas fields of New York State.

The Tioga-Vance Natural Gas Corp. has announced that it will drill five tests on as many different structures in Tioga County, Pennsylvania, and that it will begin work on the first well in 10 days using a combination rotary and cable outfit. The company is composed of New York and Tioga men headed by W. J. Vance of Morristown, N. J.

The Huron Gas Co.'s No. 1 Andrews, in the Wayne, New York, Field, hit the Oriskany pay this morning and at 2 feet in the sand was making gas at the rate of 1,500,000 feet a day. The Burns Oil & Gas Co.'s No. 1 Clark, in the same field, should be completed some time today. The Huron Gas Co.'s No. 1 Walsh, located west of the Wayne Field, which came in making 250,000 feet of gas naturally, was shot with 40 quarts of nitroglycerin and the production increased to 1,000,000 feet a day. Eight other wells in the Wayne Field are drilling at interesting depths and should be completed shortly.

Robert and Maurice Hungiville, of Rixford, Pa., have an interesting well on the Sam Booth land between the boroughs of Coudersport and Shinglehouse in Potter County, Pennsylvania. The well is bottomed at 4,900 feet and is flowing 50,000 cubic feet a day. The well was reported as in the very top of the sand and the owners are confident of a big well when it is drilled in. Potter County lies west of Tioga County and east of McKean County, in which the Bradford oil field is located.

A number of wells drilling in the Tioga County, Pennsylvania, Field, are near completion depths. The Penn United Gas Co.'s No. 1 Leander Gee, in Farmington Township, should be completed next week. The North Branch Development Co.'s No. 1 Middaugh should be completed within two weeks. The same company's No. 1 Colegrove, in Lawrence Township, is about at the same depth as the Middaugh farm test.

VICE PRESIDENT AMES ON ANTITRUST LAWS

NEW YORK, Oct. 26.—Modification of the antitrust laws to permit legitimate co-operation in industry was urged by C. B. Ames, vice president of The Texas Company, in an address before the New York University conference on the relation of law and business here today.

Mr. Ames attacked the antitrust laws as prohibiting legitimate co-operation because they threaten criminal prosecution of violation without clearly specifying what constitutes violation. Oscar Sutro, vice president of Standard Oil Co. of California, will speak on the same subject at tonight's session. Representatives of the coal and copper trade are also participating in the conference.

OIL SCOUTS OF THE PERMIAN BASIN HOLD CHECK MEETINGS AT MIDLAND

Scouts of the Permian basin have selected Midland, Tex., as permanent headquarters for the principal check meeting of West Texas. Oil scouts who attend well check meetings in San Angelo and eastern New Mexico will exchange data with the main body of scouts in the Midland meeting.

Some of the scouts who attended the weekly well check and sample cutting meeting at Midland for West Texas and eastern New Mexico Permian Basin areas are shown around their tables in the scouts' room at Hotel Scharbauer. Men in the picture seated from left to right are: Jimmie Woods, Vacuum; Dave Finley, Continental; Doc Self, Amerada; Stud Watson, Prairie; Si Stinson, Humble; Eugene Boehms, University of Texas; Bert Flood, Prairie; Ford Turner, Pure.
Standing: George Shelton, Simms; W. W. Patrick, Texas; Allen J. Watts, Mid-Continent; L. C. Link, Texas Pacific Coal & Oil; A. W. Wyatt, Atlantic, and Earl Payne, Phillips.

Oil men who attended the first meeting at Midland, or who will attend future meetings are: G. M. Shelton, Simms Oil Co.; R. W. Patterson, H. H. Johnson, W. L. Brown, Gulf Production Co.; Allen J. Watts, Mid-Continent Petroleum Corp.; E. R. Mosby, Skelly Oil Co.; R. E. Witty, The Texas Company; A. W. Wyatt, Atlantic Oil Producing Co.; D. J. Finley, Continental Oil Co.; Earl Payne, Phillips Petroleum Corp.; Joe C. Hemphill, Vacuum Oil Co.; L. C. Link, T. P. Coal & Oil Co.; S. S. Stinson, Humble Oil & Refining Co.; S. R. Self, Amerada Petroleum Corp.; W. E. Whitcomb, The California Co.; J. N. Gregory, University of Texas; Bert Lloyd, C. P. Watson, W. A. Yeager, Prairie Oil & Gas Co.; Bob Brennand, The California Co.; Chester Sappington, Empire Gas & Fuel Co.; R. E. Nelson, Jr., Stanolind Oil & Gas Co.; Kane Greeleaf, Phillips Petroleum Corp.; Johnnie Cram, Continental Oil Co.; R. H. Woods, Vacuum Oil Co.; Bill Brown, Shell Petroleum Corp.; J. C. Cunningham, Humble Oil & Refining Co.; A. P. Loskamp, Barnsdall Oil Co.

EFFECT OF I. C. C. RATE DECISION NOT HARMFUL

(Continued from Page 89)

(Docket No. 17,000, Parts 4 and 4-A) will be made effective December 3, 1931. The carriers are given until December 1, 1931, to present their plan for pooling which is a condition to the publication of the specific increases suggested. Under the circumstances, therefore, the proviso that the rates on petroleum products, covered by the General Oil Rate Cases shall not exceed the basis thereprescribed, as a practical matter denies any increases in rates on petroleum products, in eastern, southern or southwestern territories beyond such as arise from the orders in the General Oil Rate Cases.

3. "The return realized from the freight service alone, as distinguished from other forms of service rendered by the carriers," such as passenger service, for example, as to which the commission said:

"It is plain that it has been the passenger rather than the freight business which has been a drain on net railway earnings."—C. E. K.

ADDITIONAL DATA URGED BY TEXAS MARKETERS

(Continued from Page 89)

ler of Public Accounts, addressed the convention the afternoon of the second day and discussed mainly tax evasion by gasoline bootleggers. He pointed out that while there was undoubtedly plenty of tax evasion in the gasoline industry the amount of collections by his department under the new law requiring the refinery to pay the tax was very materially greater than under the former provision where it was collected from the retailer. This too, he pointed out, in a year of depression when the amount of gasoline consumed would naturally be less.

The new law went into effect in the early part of the summer this year. May collections were on about 6,000,000 gallons more than for May of last year under the old system. June this year ran 4,000,000 gallons ahead, July 3,000,000 and August, the last month for which figures are available, 8,000,000 gallons ahead of last year.

All of the former officers and directors were re-elected for another year and are as follows:

W. C. Gaylor, Gaylor Oil Co., Houston, president; E. J. Marston, Texas Pacific Coal & Oil Co., Fort Worth, vice presi-

CALIFORNIA CRUDE OIL PRICES

(Continued from Page 93)

ASSOCIATED OIL CO. PRICES

Associated Oil Co. prices, effective June 20, are as follows:

Ventura Avenue, 22 gravity, 58 cents, with 2 cents added for each degree upward to and including 30 gravity, which is 74 cents.

Kettleman Hills, 30 gravity and above 66 cents.

Potrero, 24 gravity, 69 cents, with 2 cents added for each degree upward to 34 gravity, which is 69 cents.

UNION OIL CO. OF CALIFORNIA

Crude Oil Prices for Its Purchases at the Well for Crude Produced in Strict Accordance With the Production Allocations Made by the California Statewide Curtailment Committee Effective 7 a.m., June 20, 1931

(All gravities above these quoted take highest price for that field)

Gravity °A.P.I.	Signal Hill	Alamitos Heights, Seal Beach	Huntington Beach	Athens, Rosecrans, Dominguez	Torrance	Santa Fe Springs	Playa Del Rey*	E. Coyote, Richfield	Montebello	Santa Paula	Orcutt	Coalinga	Lost Hills	McKittrick, Kern River, Sunset-Midway, Elk Hills, Buena Vista Hills	Gravity °A.P.I.
11-13.9	.....	....	....	....	....	....	....	....	....	....	....	....	....	$.50	11-13.9
14-14.9	.....	$.65	$.65	$.65	....	$.65	....	....	....	$.65	$.65	$ 65	$.55	$.55	.55	14-14.9
15-15.9	.....	.65	.65	.65	....	.65	....	....	.65	.65	.65	.65	.55	.55	.55	15-15.9
16-16.9	.....	.65	.65	.65	....	.65	....	....	.65	.65	.65	.65	.55	.55	.55	16-16.9
17-17.9	.....	.65	.65	.65	....	.65	....	....	.65	.65	.65	.65	.55	.55	.55	17-17.9
18-18.9	.....	.65	.65	.65	....	.65	....	....	.65	.65	.65	.65	.55	.55	.55	18-18.9
19-19.9	.....	.65	.65	.65	....	.65	....	$.65	.65	.65	.65	.65	.55	.55	.55	19-19.9
20-20.9	.....	.65	.65	.65	....	.65	....	.65	.65	.65	.65	.56	.55	.55	.55	20-20.9
21-21.9	.....	.65	.65	.65	....	.65	....	.66	.66	.65	.65	.57	.55	.57	.55	21-21.9
22-22.9	.....	.65	.65	.65	....	.66	....	.67	.67	.65	.65	.59	.55	.59	.56	22-22.9
23-23.9	.....	.67	.67	.67	....	.67	....	.68	.68	.65	.65	.61	.55	.60	.58	23-23.9
24-24.9	.....	.69	.69	.69	$.69	.68	$.65	.69	.69	.65	.66	.63	.56	.62	.61	24-24.9
25-25.9	.....	.71	.71	.71	.71	.70	.65	.70	.70	.65	.68	.65	.57	.64	.64	25-25.9
26-26.9	.....	.73	.73	.73	.73	....	.65	....	.72	....	.70	.67	....	.66	.66	26-26.9
27-27.9	.....	.75	.75	.75	.75	....	.68	....	.74	....	.72	....	....	.67	.68	27-27.9
28-28.9	.....	.77	....	....	.77	....	.71	....	....	....	.74	....	....	.69	.71	28-28.9
29-29.9	.....	.79	....	....	.79	....	.73	....	....	....	.76	....	....	.71	.74	29-29.9
30-30.9	.....	.81	....	....	.81	....	.75	....	....	....	.78	....	....	.72	.76	30-30.9
31-31.9	.....	....	....	....	.83	....	.78	....	....	....	....	....	....	....	....	31-31.9
32-32.9	.....	....	....	....	.85	....	.80	....	....	....	....	....	....	....	....	32-32.9
33-33.9	.....	....	....	....	.87	....	.83	....	....	....	....	....	....	....	....	33-33.9
34-34.9	.....	....	....	....	.89	....	.85	....	....	....	....	....	....	....	....	34-34.9

*Subject to a gathering charge of 5 cents per barrel.

dent; E. H. Eddleman, American Refining Properties, Wichita Falls, vice president; George D. Bowers, Simms Oil Co., Dallas, vice president; C. M. McNutt, McNutt Oil Co., El Paso, vice president; Chester A. Slimp, Slimp Oil Co., San Antonio, secretary; L. H. Flinn, managing director-counsel; J. B. Russ, Consolidated Oil Co., Houston, chairman of board of directors.

Directors: C. H. Hefley, Mann-Hefley Oil Co., Corpus Christi; Frank P. Schneider, Simms Oil Co., Dallas; S. H. Helton, Ranger Oil Co., Houston; Thomas Lombardy, Oleander Oil Co., Beaumont; A. M. Hughes, Phillips Petorleum Co., Amarillo; O. T. Davenport, Laurel Oil Co., San Antonio; John McCoy, Marathon Oil Co., Fort Worth; W. B. Ellis, Independent Oil Co., Hillsboro; Arthur Blohm, Blohm Oil Co., Temple; Edgar Little, Little Oil Co., Houston; G. W. Reed, Panhandle Refining Co., Wichita Falls; John Cronin, Grayburg Oil Co., San Antonio.

CONTINUED STRENGTH IN OKLAHOMA MARKET

(Continued from Page 12)

Middle West at this time. Many feel that this advance will be preceded with an increase of 10 or more cents per barrel in posted crude oil schedules. The higher crude oil prediction is based on the contention that through proration agreements backed by martial law in Oklahoma and Texas, the crude supply has been brought in line with the demand and the producing branch of the oil business is entitled to prices more in line with the cost of production. In this connection, certain court tests of the legality of proration laws in both Texas and Oklahoma, including the martial law action of the states' governors, are being watched by refiners due to their bearing on the probable crude oil price structure over the balance of the year and through 1932. The continuance of the present crude oil and price structure with possible advances for the immediate future is based entirely on the legal soundness of proration laws and should court decisions be unfavorable, the recent trends in prices could quickly be reversed.

Gasoline and Naphtha

The U. S. Motor gasoline was generally quoted at a low of 4 cents to the trade in Oklahoma on Monday and Tuesday. Prices ranged up to 4½ cents, the higher quotations generally being for special grades where the material had better than the average knock rating and distillation range. The quantity of gasoline which is substantially better than U. S. Motor requirements in distillation range with a knock rating of 60 octanes or better, is increasing and sellers are asking and securing more than the low of the current U. S. Motor market.

Open market business was not heavy at current quotations but reports of distress gasoline are rare. The relatively low contract prices, previously explained, naturally tends to reduce open market quotations to a minimum and in the absence of any speculative buying the market appears dull.

The higher gravities are as strong as the U. S. Motor grade. Although some lower priced material in the 400, 390 and 375 endpoint grades has been reported in Texas, the Oklahoma market is firm. No 400 endpoint is available for prompt shipment under 4¼ cents. The 375 endpoint was sold the first of the week at a low of 4⅝ cents and a high of 4⅞ cents. The advance in natural gasolines brought higher prices for the 350 and 360 endpoint grades which were practically unobtainable in Oklahoma the first of the week. The grades were nominally quoted at 5⅛ to 5¼ cents.

Natural Gasolines

Natural gasolines in Oklahoma ended last week at a flat price of 4½ cents. The first of the week the supply for immediate shipment was confined in Oklahoma to one or two manufacturers and they had advanced their price to 4¾ cents. The strength shown in this product furnished the biggest surprise of the month to the trade. In the face of the larger supply from Oklahoma plants, it was thought that naturals would do well if they did not drop below the U. S. Motor quotation. However, they have continued to maintain their premium relationship to refinery gasolines and will end the month in a strong statistical position.

The unexpected strength shown in October makes the trade slow in predicting the market for November. About the only guess that any will hazard is a prediction that the price will depend largely on the refinery market. They feel that a tight November market is assured provided the Mid-Continent refinery market does not weaken.

Kerosene and Distillate

With the better grades of furnace oils just under 2 cents, it is believed that the 41-43 water white grade of kerosene will advance to a low of 2⅛ cents. On Monday and Tuesday, buyers with actual orders to place could still buy a little material at 2 cents. This condition prevailed although the North Texas market advanced to a low of 2⅛ cents after substantial local buying had taken the supplies available over the balance of the month.

Furnace oil material was quoted over a price range of 1⅝ to 1⅞ cents. Prices vary rather widely among the refiners. Several refiners specialize on a certain grade and get the top of the market although the gravity is 35 or less. The prime white grades were stronger the past week and advanced in price.

Fuels and Gas Oils

Low cold test fuels of high gravity continue scarce and there has been a general advance in Oklahoma quotations. The price ranges on the lower gravities are unchanged although more material is moving at the top of the market. Some high cold test material of around 24 gravity made its appearance in the Oklahoma market during the week. This fuel oil came from Oklahoma City and Panhandle refineries. The volume was not sufficient to disturb the general market. It was generally quoted around 25 cents, basis Group 3.

The high cold test and U. G. I. gas oils are more freely offered but prices continue firm at a low of 1⅜ cents in Oklahoma.

Lubricants

Price cutting has been reported in some grades of bright stocks and neutral oils. This includes oils of low pourpoint for both export and domestic movement. General prices are unchanged.

Petroleum wax is inactive. Quotations of 2⅛ cents per pound at New Orleans were reported. At least two Oklahoma manufacturers have withdrawn from the market and are not quoting at this time.

MARKET IN OKLAHOMA SET AT 545,000 BBLS.

(Continued from Page 24)

down since the institution of military rule.

The Magnolia Petroleum Co. named 5,000 bbls. a day as its requirements from the Oklahoma City Field, where it has no production. The company has been running 26,668 bbls. of its own production from other fields and buying 8,953 bbls. a day. These runs, together with 5,000 bbls. a day from Oklahoma City, give the company 30,603 bbls. a day.

The Wirt Franklin Petroleum Corp., Cromwell-Franklin Oil Co., Indian Territory Illuminating Oil Co., Atlantic Oil Producing Co., Amerada Petroleum Corp., Anderson-Prichard Oil Corp. and the British American Oil Co., through their representatives, testified that they were selling all or most of their allowable Oklahoma City production. Some of them bought oil in unprorated fields.

Cushing Gasoline & Refining Co. of Cushing, Okla., gave its requirements as 5,000 bbls. a day. It buys or produces oil in Oklahoma City, Greater Seminole and other fields. Its refineries are at Blackwell and Cushing. The Champlin Refining Co., which has been running about 5,000 bbls. a day through its Enid refinery, nominated an additional 10,000 bbls. per day. The Wilcox Oil & Gas Co. testified it would be willing to take 15,000 to 20,000 bbls. a day from its own Oklahoma City wells, but was not in the market for purchased oil. It is running about 2,500 bbls. a day from Oklahoma City, which with oil from other areas it is running through its Bristow plant. The Sunray Oil Corp. nominated 4,000 bbls. a day in addition to its own production. Kanotex Refining Co. of Arkansas City asked for 1,000 bbls. a day from Oklahoma City.

Been Pulling From Stocks

The Carter Oil Co. nominations included 15,000 bbls. a day from Oklahoma City, 25,000 bbls. from Greater Seminole, 2,000 bbls. from Tatums, and 13,000 bbls. from other areas, 55,000 bbls. a day in all. The company has been withdrawing oil from storage for some time. R. M. Young, president of the Carter Oil Co., gave it as his opinion that the demand for oil in Oklahoma in November would be 525,000 bbls. per day and in December 500,000 bbls. per day.

The Barnsdall Oil Corp. nominated 7,500 bbls. daily, of which 3,500 bbls. was desired from the Greater Seminole Field. Continental Oil Co.'s requirements from Oklahoma City totaled 18,500 bbls. a day and 7,500 bbls. a day from other fields, a total of 26,000 bbls. a day from the State.

The Empire companies nominated 42,500 bbls. a day, 35,000 bbls. from Oklahoma City and the balance from other pools. The Gypsy Oil Co. nominated 23,500 bbls. a day from Seminole area and 10,000 bbls. a day from other pools. The Globe Oil & Refining Co. is now getting 13,000 bbls. a day from the State, which amount it nominated, and the Garber Refining Co. named 3,000 bbls. as its requirements. The Mid-Continent Petroleum Corp. nominated 23,000 bbls. a day, of which it asked that 7,000 bbls. a day come from the Seminole Field. The Producers & Refiners Corp. asked for 1,600 bbls. per day. The Peacock Refining Co. nominated 1,500 bbls. daily from the Oklahoma City Field. The Rock Island Refining Co. named 4,000 bbls. a day to fill its requirements. It is running 1,500 bbls. a day from Carter and Stephens Counties. The Standish Pipe Line Co. (Phillips Petroleum Co.) requires 11,500 bbls. a day. Not all the buyers in the State were questioned, but none of the larger buyers was overlooked in the commission's desire to ascertain at first hand how much crude oil the refining companies needed for the remainder of the year.

TANK WAGON CHANGES

(Continued from Page 94)

10.1 cents October 13 and in South Bend to 8 cents October 12.

Standard Oil Co. of Kentucky reduced the tank wagon and station prices to 17½ cents in Mobile, Ala., October 15. On October 8 these prices were reduced to 14½ cents in Vicksburg, Miss. On October 10 these were reduced to 18 cents in Jacksonville and Miami, Fla. On the same date these prices were reduced to 16 cents and 17 cents in Louisville, Ky. On October 16 the gasoline station price was reduced to 16 cents in Jacksonville, Fla. On the same date the gasoline tank wagon and station prices were reduced in Miami, Fla., to 17 cents and 18 cents. On October 17 these prices were reduced to 17 cents each in Tampa, Fla. On the same date these were reduced to 16 cents and 17 cents in Lexington, Ky.

Continental Oil Co. reduced the gasoline tank wagon and station prices in Cheyenne, Wyo., to 14 cents each October 17.

Atlantic Refining Co. reduced the gasoline tank wagon and station prices in Scranton, Pa., and in Allentown, Pa., to 10 cents and 11 cents on October 22.

Standard Oil Co. of Louisiana reduced the gasoline tank wagon and station prices in Alexandria, La., to 16 cents each on October 26.

Magnolia Petroleum Co. reduced kerosene throughout Texas and Arkansas October 22 in accordance with the accompanying table.

UNIT ACREAGE BASIS FOR EAST TEXAS AREA

(Continued from Page 13)

by this plan, but that he was willing to make a sacrifice in order to cut down drilling. "Too much drilling has been done in the area, and I want to go on record as favoring the acreage plan," said Mr. Burford.

J. K. Hughes, independent operator of Mexia, also spoke in favor of the acreage plan.

J. Edgar Pew's Opinion

J. Edgar Pew, executive vice president of the Sun Oil Co., spoke at length, saying he thought the plan as outlined a very practical one, due to the fact that it took care of the small producer. "It seems to be the only equitable plan," said Mr. Pew, "and I will try to get the big companies to join the plan 100 per cent if the small operators go 100 per cent for the plan." He also suggested that until the plan could assume some definite and tangible form within the next 10 or 15 days that the companies and operators should not start any more wells, and not drill a line well unless necessary to drill an offset. He desired that all in attendance at the meeting ask other operators to stop their drilling until the plan could be put in motion.

E. H. Blum, vice president and general manager of the Atlantic Oil Producing Co., Dallas, gave the position of his company as being in favor of curtailment of drilling in East Texas. The company owns several hundred acres of leases in the district and has a pipe line serving the fields.

Beeman Strong of Yount Lee, Inc., thought it as fair a plan as could be adopted for the district and said his company was ready to curtail drilling and hold down production in East Texas in order to save the field and the entire industry.

E. G. Allen of the Shell Petroleum Corp. spoke for his company, stating that it was ready to go along 100 per cent for the plan.

He cited the Yates Field, Pecos County, as having once been in the same situation as East Texas, but that the problems were eventually ironed out when the field was put on its present acreage basis form of curtailment. That field is now producing an allowable of only 65,000 barrels per day. Mr. Allen also stated that he felt sure that if the plan was adopted and used it would not be long before the producers would witness an increase in price of their oil from the district. This bit of conjecture was highly appreciated by the group in attendance.

Jim Gahan, vice president of the Tidal Oil Co., cited the acreage held by his company in the district and said the production from these leases was going to the company's refineries, but that he believed the company would rather purchase outside oil for its refineries than to see more drilling done in the fields. Therefore, would like to see the plan adopted to curtail drilling, thereby bettering conditions in the field and the industry.

W. B. Hamilton volunteered the fact that he had just come from a meeting with Gulf Production Co. and Humble Oil and Refining Co. executives in Houston and that those two companies favored the "acreage plan."

John Mouser, of the Prairie Oil and Gas Co., expressed belief that his company would ride along on the equitable acreage plan as promulgated.

A representative of the Stanolind Oil & Gas Co. unofficially stated that his company would no doubt favor the plan as outlined.

MOTOR TRANSPORT MEETING

The Petroleum Motor Transport Association of Oklahoma will hold a meeting next Friday evening, October 30, at 6:15 o'clock in the quarters of the Purchasing Agents Association, 307 South Cincinnati Avenue, Tulsa. There will be a dinner, moving pictures and discussions.

Well Known Oil Man, Lawyer and Publicist Victim of Pneumonia

William H. Gray, well-known oil man and former practicing attorney, died of pneumonia in a Tulsa hospital Thursday, October 22. He was 54 years of age.

For many years Mr. Gray was a prominent figure in the Mid-Continent and Gulf Coast Fields, first as a lawyer and later as a publicist on the subject of petroleum economics. He was also engaged in the production of oil and the

William H. Gray

manufacture of gasoline from natural gas. It was as a writer and public speaker that Mr. Gray gained most prominence in recent years and he was frequently heard among the speakers at national and state conventions of oil men.

Mr. Gray was born in Overton, Tex., and lived in that town until his early manhood. He graduated from the University of Texas at 22 years of age, and began the practice of law. He was elected county attorney of Jefferson County, of which Beaumont is the county seat, and filled that office several years. Meanwhile he entered the oil business following the opening of the Spindletop Field near Beaumont. He moved to Houston, where he continued his law practice and oil operations, and about 1905, while assistant attorney general of Texas, became widely known for his fight to keep the old Standard Oil Co. of New Jersey from operating in Texas.

Mr. Gray came to Tulsa from Texas and at once became active in behalf of the oil producers of the state. He organized the National Association of Independent Oil Producers, and while this organization never attained large membership, it gave Mr. Gray as its president a standing in the oil business which might have been difficult for an individual to have attained.

Ill health caused Mr. Gray to slow down his activities. He had been in poor health much of this year and had intended to go to Hot Springs, Ark., in an effort to recuperate when he was stricken with pneumonia.

Personally William H. Gray was a genial and companionable man. He had many friends in the industry.

LATERALS PLANNED FROM GAS LINES

Many natural gas companies are said to be planning lateral extensions to their lines which have been constructed from large gas fields to main centers of consumption. These large lines, such as the Continental Construction Co.'s project from the Panhandle of Texas to Chicago, a distance of 950 miles, and that of the Panhandle Eastern Pipe Line Co., from Texas and southwestern Kansas to Indianapolis, a distance of 1,350 miles, have immense capacities. As markets for this natural gas are developed and connected to the lines, loops to these lines will be necessary and extensions will be made to numerous cities and towns along the general routes of the lines.

The large wall map compiled and published by The Oil and Gas Journal, showing all major natural gas trunk pipe lines, is invaluable to all individuals and companies interested in the vast expansion of the natural gas industry. This map, printed on especially heavy bond paper, will show at a glance the cities and towns which are expected to be connected with natural gas from the large main transmission lines under construction and recently completed.

A limited number of copies of this map are available from The Oil and Gas Journal. The map is copyrighted and is not available from any other source. On the reverse side of the natural gas pipe line map is shown all crude oil and gasoline trunk pipe lines in the United States. The entire compilation, showing all natural gas, crude oil and gasoline pipe lines, may be procured for $1, postpaid, from The Oil and Gas Journal, Tulsa.

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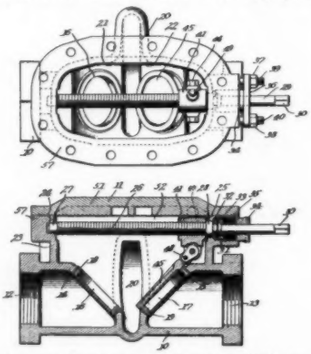
NEW TYPE OF TWO WAY CHECK VALVE DEVISED

A new type of check valve has been patented by Harry F. Stevens of Bartlesville, Okla. The new valve is capable of checking against backflow in either of two directions by setting the valve according to direction of flow desired. While primarily designed for a special purpose, it can be applied to any flowing material or condition where it is desired to alternate the direction of flow in a pipe line but still protect against backflow from either direction.

In addition to being so designed as to permit of checking backflow from either direction the valve has also incorporated in it a third feature that will permit it to be made entirely inoperative and allow free flow of gas or fluid through the line in either direction without check.

The valve consists of a cast body pro-



Two-way check valve. Patent applied for.

vided with two seats facing each other at opposite ends of the body and inclined at an angle of 45° to the axis of the opening.

The closure plate or flap is provided with hinged connection at the top and this connection is in turn attached to a threaded nut that travels upon a threaded shaft. This shaft terminates in a shank that projects outside of the body casting of the valve and has a square end that can be fitted with a key or wrench and by rotating the shaft the nut carrying the flap will be moved from one position to the other.

The novel feature of this portion of the device is a boss on the upper part of the threaded nut that travels in a grooved recess in the cap of the valve that directs the path of movement of the flap and as it passes the central position between the two valve seats the flap is swung outward from the center of the valve body into a recess provided to receive it and in such a position leaves the passage through the valve open for free flow of gas or fluid through the valve in either direction.

The valve can be built in various sizes and for pressures ordinarily encountered in pipe lines and while not actually placed upon the market it has been given sufficient use to determine its practicability and in addition to simplifying installations will lower costs of equipment needed. An application for a patent for the device was filed June 2, 1930.

Late Fields

(Continued from Page 24)

were the same and that more than half of the wells in the north end of the field are producing from two or more sands and that the entire pool is a common source of supply. The Wirt Franklin petition was heard by the Corporation Commission about five months ago but no order was issued, shortly after the Indian Territory Illuminating Oil Co.'s petition was heard but no decision was given in either case.

Three tests in the Oklahoma City Field are ready to be completed when permission is given by the military officials. The final connections were completed Monday and it is expected a production test will be made this week. These tests are located on the west side of the field. They include the Plains Petroleum Co. and Capitol Producing & Refining Co.'s No. 1 Baum, SE cor. NW, Section 15-11-3w, which found the Wilcox sand at 6,356-6,456 feet; Phillips Petroleum Co.'s No. 1 Dehn, NW cor. SW NE, Section 3-11-3w, finding the Wilcox sand at 6,303-6,400 feet; same company's No. 1 Chaplin, SE cor. NE NW NW, Section 10-11-3w, which has the Wilcox sand at 6,337-6,450 feet.

New operations in the St. Louis district include a new location for C. W. Jones and others' No. 1, SW cor Section 35-7-4, on Skelly Oil Co.'s acreage; The Panther Oil Co.'s No. 1 Townlot, NW cor Section 23-7-4, an old well drilling deeper, old total depth having been 4,072 feet.

In Pontotoc County, The Conservation Oil Co.'s No. 1 Hart, NW cor Section 27-5-6, is a location. It is on a unitized block on which several other tests have been completed. Marrs and others' No. 1, in Section 21-5-6, made 124 bbls. of oil in 24 hours from the shallow sand at 1,619-23 feet. The well is a half mile extension from any other production in the vicinity and is a new producing horizon for the area.

A survey of the storage situation in Oklahoma and Kansas indicates that 50,000 bbls. per day of crude oil is being withdrawn in Oklahoma and 15,000 bbls. per day in Kansas.

ZONING ORDINANCE ON DRILLING STANDS

WASHINGTON, D. C., Oct. 26.—The Supreme Court of the United States refused to review the case of Marblehead Land Co. and others vs. City of Los Angeles, No. 181, in which the validity of a zoning ordinance passed by the city of Los Angeles placing certain vacant land in a residential zone and prohibiting oil drilling on the land was in issue.

The petitioners called the attention of the court to the fact that they have expended $136,000 in work preliminary to the production of oil, claiming to have relied on a prior ordinance which excluded the land from the residential district. On petition of adjoining property owners, a new ordinance was passed which included the property within the residential district.

The land in question, according to the opinion of the lower court, contained 291 acres, and had heretofore been used for farming operations, but is now believed to have possibilities as an oil land.

In holding the ordinance valid the Circuit Court of Appeals for the Ninth Circuit declared it was established that the fire hazard resulting from the drilling operations was debatable, that diffusion of noxious and offensive gases into surrounding dwellings would result, and that the land was suitable for use for residence purposes.

The ordinance was sustained under "that more recently developed phase of the police power which in the interest of the general welfare permits a city to limit the class of structures to be erected and the kind of business which can be maintained within various areas or zones so as to regulate and control the future development and growth of the city."

ORGANIZE NEW ASSOCIATION

At a meeting held in St. Louis Tuesday, a new independent jobbers' association was organized. Col. E. H. Hilpp of the Kentucky Consumers Oil Co. was elected chairman of the organization committee. The association will have its headquarters in St. Louis.

The following program was adopted at the meeting: (1) To fight against any change in the Sherman antitrust law or the Clayton act, except to strengthen them; (2) to fight against any further mergers of the old Standard Oil Co. units; (3) to work for a fair protective tariff on oil; (4) to fight against the so-called "patent pool"; (5) to fight the general use of lease and agency agreements, whereby the large companies bind the independent filling station men to exclusive sale of their products, such agreements being deemed in restraint of trade; and (6) to fight against price dictation or manipulation of prices and to oppose the proposal for a dictator for the petroleum industry.

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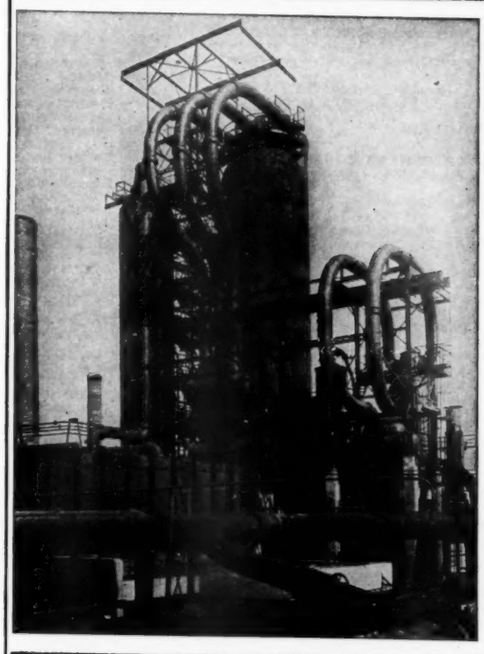

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Detailed Operations for All Fields for September, 193

SUMMARY OF ALL FIELDS
Wells Completed

	Comp.	Prod.	Dry	Gas
Eastern	134	237	30	54
Central Ohio	48	231	17	24
Lima	10	15	1	8
Indiana	6	0	3	3
Michigan	20	6,700	8	6
Kentucky	26	106	7	9
Illinois	2	0	2	0
Kansas	25	3,643	9	8
Oklahoma	61	93,427	27	12
North Central Texas	48	959	31	7
East Central and East Texas	304	*40,101	17	0
East Texas gas area	3	0	3	0
West Texas	7	708	2	0
Texas Panhandle	7	1,015	1	1
Gulf Coast	27	8,396	17	2
Southwest Texas	32	8,638	24	1
North Louisiana	13	0	8	5
Arkansas	3	0	3	0
Mississippi	1	0	0	1
Montana	9	0	3	6
Wyoming	7	2,875	1	0
Colorado	1	600	0	0
New Mexico	5	50	4	0
Total Septtember	799	167,782	218	147
Total August	760	163,781	194	135
Difference	39	4,001	24	12

*The initial production of the various pools in the East Texas area represents only the first hour's or fractional part of an hour's production, as the wells are permitted to flow only a short time in conformance with the State's curtailment orders, or for other reasons. In some instances no gauge whatever is taken on the initial brief flow of the wells. None of the oil companies is keeping even an estimate on potential initial production in the East Texas Field.

Rigs and Wells Drilling

	Rigs	Drlg.	Ttl.
Eastern	39	161	200
Central Ohio	29	101	130
Lima	3	23	26
Indiana	6	54	60
Michigan	70	101	171
Kentucky	10	76	86
Tennessee	0	14	14
Illinois	2	16	18
Missouri	0	1	1
Kansas	18	109	127
Oklahoma	50	213	263
North Central Texas	26	94	120
E. Central and East Texas	221	510	731
East Texas gas area	9	41	50
West Texas	11	70	81
Texas Panhandle	17	27	44
Gulf Coast	8	79	87
Southwest Texas	10	87	97
North Louisiana	16	55	71
Arkansas	7	27	34
Mississippi	11	20	31
Alabama	2	3	5
Montana	16	72	88
Wyoming	11	77	88
Colorado	12	81	93
New Mexico	6	48	54
Utah	1	19	20
Total September	611	2,179	2,790
Total August	615	2,068	2,683
Difference	4	111	107

Note—In the following report the Section, Township and Range are given first; then the farm, the owner, the serial number of the well and the initial production of the well. In lines where the Section, Township and Range are missing the wells are located in the Sections, Townships and Ranges which appear next above in the report.

OKLAHOMA FIELDS

Summary of Rigs and Wells Drilling

County—	Rigs	Drlg.	Ttl.
Alfalfa	0	2	2
Atoka	2	1	3
Beckham	1	3	4
Blaine	0	1	1
Byran	0	1	1
Caddo	0	4	4
Canadian	0	1	1
Coal	0	2	2
Carter	1	3	4
Cherokee	1	1	1
Cleveland	1	0	1
Comanche	0	2	2
Creek	6	27	33
Garfield	2	2	4
Garvin	0	1	1
Greer	0	2	2
Grant	1	0	1
Hughes	0	1	1
Haskell	0	3	3
Jefferson	0	1	1
Johnson	0	1	1
Kay	0	4	4
Kiowa	0	3	3
Latimer	0	2	2
Le Flore	0	1	1
Lincoln	1	1	2
Logan	0	3	3
Love	0	1	1
McIntosh	0	2	2
Marshall	0	5	5
Murray	0	1	1
Muskogee	1	10	11
Noble	1	6	7
Okfuskee	1	5	6
Oklahoma	11	54	65
Okmulgee	3	10	13
Osage	3	4	7
Pawnee	2	12	14
Payne	1	1	2
Pittsburgh	1	2	3
Pontoc	0	3	3
Pottawatomie	3	0	3
Roger Mills	0	2	2
Seminole	2	2	4
Sequoyah	0	1	1
Stephens	3	4	7
Tulsa	2	7	9
Washita	0	2	2
Wagoner	1	6	7
Total September	50	213	263
Total August	42	232	274
Difference	8	19	11

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Beckham	1	0	1	0
Carter	2	2,460	0	0
Creek	9	230	4	3
Kay	1	0	1	0
Marshall	2	35	0	0
Muskogee	6	0	2	3
Oklahoma	12	90,550	0	0
Okmulgee	1	0	0	1
Okfuskee	1	0	1	0
Osage	10	0	7	3
Pawnee	7	20	5	0
Pittsburgh	1	0	0	1
Pontotoc	1	132	0	0
Rogers	1	0	1	0
Seminole	1	0	1	0
Stephens	1	0	1	0
Texas	1	0	0	1
Tulsa	1	0	1	0
Wagoner	2	0	2	0
Total September	61	93,427	27	12
Total August	39	50,877	10	10
Difference	22	42,550	17	2

WELLS COMPLETED
BECKHAM COUNTY

15-9-23w Montgomery, Heiden et al 1... dry

Wells completed 1
Dry 1

CARTER COUNTY

24-1s-2w Franklin, Carter Oil Co. 4....2330
30-1s-2w Burton, Gwin et al 1 130

Wells completed 2
Production 2460

CREEK COUNTY

1-1[illegible]-8 Schuler, Abbott, Dean et al 1.. dry
4-17-10 Johns, Hollifield et al 1-A .... gas
Smith-Wilkinson, Iron Mountain Oil Co. 2 ..... gas
33-17-11 Shoals, McCurry et al 1-A .... dry
11-19- 9 Flinchin, M. S. Hughes 2..... 90
18-19- 9 Weaver, A. A. Bailey et al 1.. 140
9-17-10 Char-Co-Ten-Tan-Ha, Central Commercial Oil Co. 2 ..... gas
14-16-10 Barnett, W. S. O'Hair et al 1. dry
15-15- 8 Wilson, F. R. Billingslea 1 .... dry

Wells completed 9
Production 230
Dry 4
Gas 3
Gas production 3,000,000

KAY COUNTY

24-28-3 Hays, Summit Drilling Co. et al 1 ..... dry

Wells completed 1
Dry 1

MARSHALL COUNTY

30-7s-6 Little, R. L. McCrory et al 1... 30
31-7s-6 Adams, J. F. McCrory et al 1.. 5

Wells completed 2
Production 35

MUSKOGEE COUNTY

8-15-18 Brown, H. L. Jolly et al 2 .... dry
30-15-16 Howard, J. E. Rose et al 12 .. gas
4-15-18 Dills, Western Drilling & Electric Co. 1 12
14-15-15 V. Smith, C. W. Brown 3 ..... dry
8-15-15 Bemo, Jolly & Reed 1 ..... gas
9-15-18 Benge, C. C. Wachob 1 ..... gas

Wells completed 6
Dry 2
Gas 3
Gas production 19,255,000

OKLAHOMA COUNTY

3-11-3w Clift, Phillips Pet. Co. 1.... [3]8396
1-11-3w Martin, Wilcox & Marshall 1 [2]2468
10-11-3w Leverish, Phillips Pet. Co. 1. [5]5166
15-11-3w Spencer, Skelly Oil Co. 1.... [2]8183
34-12-3w Carey, Westgate Oil Co. 3 ..[3]18718
2-11-3w Connor, Spring-Rose Drlg. Co. 1 ..... [2]6195
3-11-3w Bisbee, Morgan Royalty Co. 1 [4]7586
15-11-3w Long, T. B. Slick estate 1.. [2]6639
3-11-3w Mosey, Phillips Pet. Co. 2 ... [3]8710
Central Champlin O. & R. Co. and Hall & Briscoe 4..... [3]3381
10-11-3w Qualls, Phillips Pet. Co. 1... [6]7170
15-11-3w Rodesney, Eason Oil Co. 1.. [4]7938

Wells completed 12
Production 90,550

[2]Four hours. [3]5 hours. [5]five and one-third hours. [4]Six hours. [6]Eight hours. [6]Ten and one-half hours.

OKMULGEE COUNTY

34-13-14 Brown, A. Shelton 2 ..... gas

Wells completed 1
Gas 1
Gas production 250,000

OKFUSKEE COUNTY

24-12-11 Arneit, Parkhill et al 1-A .... dry

Wells completed 1
Dry 1

OSAGE COUNTY

22-27-11 Peters & Prod. & Ref. Corp. 7. gas
Peters & Prod. & Ref. Corp. 6. gas
25-26- 8 Petroleum Drilling Co. 18..... gas
36-23-10 The Texas Company 9 ..... dry
14-21- 8 L. G. Stanley et al 4 ..... dry
18-21- 9 Oklahoma Power & Water 132. dry
25-21-11 Oklahoma Nat. Gas Corp. 1,838 dry
23-20-10 Oklahoma Power & Water 131. dry
32-22- 8 W. H. Twyman 2 ..... dry
26-21-11 Oklahoma Nat. Gas Corp. 1,839 dry

Wells completed 10
Dry 7
Gas 3
Gas production 5,600,000

PAWNEE COUNTY

19-20- 7 Kilpatrick, Stanley Brewer et al 1 ..... dry
1-20- 8 Dickinson, Ramsey et al 1 5
13-20- 9 School, J. L. Essley et al 1 ... dry
14-20- 9 McCollum, T. E. Harris et al 1 dry
26-20- 9 Copeland, Sikes et al 4 15
29-20- 9 Smelzer, Cimarron Oil Co. 3... dry
19-20-10 Eaton, John Wilson et al 1 .. dry

Wells completed 7
Production 20
Dry 5

PITTSBURG COUNTY

10-7-18 Bascom, Utilities Prod. Co. 5 .. gas

Wells completed 1
Gas 1
Gas production 28,000,000

PONTOTOC COUNTY

32-5-5 Burke "D", Stanolind O. & G. 1 132

Wells completed 1
Production 132

ROGERS COUNTY

33-19-17 Mure, Braman Oil Co. 1 ..... dry

Wells completed 1
Dry 1

SEMINOLE COUNTY

18-8-6 Charley, Burgher O. & G. Co. 1.. dry

Wells completed 1
Dry 1

STEPHENS COUNTY

27-2s-7w Toney, George Pace et al 1-B. dry

Wells completed 1
Dry 1

TEXAS COUNTY

1-3-14 Safranke, Cimarron Utilities 1.. gas

Wells completed 1
Gas 1
Gas production 22,200,000

TULSA COUNTY

36-18-12 Hardridge, Gypsy Oil Co. 10... dry

Wells completed 1
Dry 1

WAGONER COUNTY

31-18-17 Watson, Brasheers et al 1 .... dry
29-18-18 S. Jones, Willis & Jones 1 .. dry

Wells completed 2
Dry 2

KANSAS FIELDS

Summary of Rigs and Wells Drilling

County—	Rigs	Drlg.	Ttl.
Barton	0	3	3
Bourbon	0	1	1
Butler	1	3	4
Chase	1	1	2
Chautauqua	0	1	1
Clay	0	1	1
Coffey	0	1	1
Cowley	2	4	6
Dickenson	0	1	1
Ellsworth	0	3	3
Finney	0	1	1
Ford	0	3	3
Franklin	1	0	1
Greenwood	2	8	10
Graham	0	1	1
Harper	0	1	1
Harvey	0	3	3
Haskell	0	1	1
Marshall	0	1	1
McPherson	4	38	42
Marion	0	1	1
Morris	2	2	4
Morton	0	1	1
Osage	0	1	1
Rawlins	0	1	1
Reno	0	2	2
Rice	2	4	6
Rush	1	0	1
Russell	1	2	3
Saline	0	1	1
Sedgwick	0	7	7
Sheridan	0	1	1
Stafford	0	1	1
Stevens	0	3	3
Sumner	0	4	4
Trego	0	1	1
Washington	0	1	1
Woodson	1	0	1
Total September	18	109	127
Total August	30	95	125
Difference	12	14	2

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Butler	1	0	0	1
Chase	1	0	1	0
Cowley	6	0	2	3
Elk	1	0	1	0
Marion	1	0	1	0
McPherson	6	3,048	1	1
Reno	1	165	0	0
Rice	3	38	2	0
Rush	2	400	0	1
Sedgwick	1	0	1	0
Stevens	2	0	0	2
Total September	25	3,643	9	9
Total August	49	23,913	7	20
Difference	24	20,270	2	11

WELLS COMPLETED
BUTLER COUNTY

27-28-4 Martin, Flint Hills O. & G. Co. 1 gas

Wells completed 1
Gas 1
Gas production 100,000

CHASE COUNTY

28-19-6 Koegeenboehn, Kline et al 1..... dry

Wells completed 1
Dry 1

COWLEY COUNTY

7-33-5 Smith, Dunlop et al 1 ..... gas
19-34-3 Vestal, Shawver et al 2 ..... gas
5-33-5 Thompson, Dunlap et al 2 ..... gas
Thompson, Dunlap et al 3 ..... gas
Thompson, Dunlap et al 1 ..... dry
6-33-5 Johnson, Smith et al 1 ..... dry

Wells completed 4
Dry 1
Gas 3
Gas production 3,450,000

ELK COUNTY

12-30-9 Donnel, Denton et al 1 ..... dry

Wells completed 1
Dry 1

MARION COUNTY

21-22-4 Le Master, Maydwell et al 1 ... dry

Wells completed 1
Dry 1

McPHERSON COUNTY

25-19-2w Suffield, Lario Oil Co. and Shell Pet. Corp. 3 ..... 11[illegible]
15-21-3w Nenfeldt, Rita O. & G. and Shell Pet. Corp. 1 ..... 12[illegible]
2-19-2w Peterson, Herndon Drlg. Co. et al 1 ..... dry
26-19-2w Unruh, Derby Oil Co. and The Texas Company 1 ..... 16[illegible]
21-19-1w Kaegi, Smith & Ash and Shell Pet. Corp. 1 ..... gas
9-19-2w Severtson, Emrick et al 1 .... 12[illegible]

Wells completed 4
Production 380
Dry 1
Gas 3
Gas production 20,778,000

RENO COUNTY

1-23-4w Goering, Palmer and Phillips Pet. Co. et al 1 ..... 16[illegible]

Wells completed 1
Production ..... 16[illegible]

RICE COUNTY

9-18-10w Blake, Allison & Fitzwilliams 1 ..... dry
33-19- 3w Purcell, E. H. Langston & Dietrich 1 ..... dry
4-21- 6w Freeman, Muth Bros. 1 ..... 3[illegible]

Wells completed 1
Production ..... 3[illegible]
Dry 1

RUSH COUNTY

23-18-16w Koril, Deep Rock Oil Corp. et al 1 ..... gas
17-19-16w Greenwalt, Boyle, Grossman et al 1 ..... 4[illegible]

Wells completed 1
Production ..... 4[illegible]
Gas 1
Gas production 35,200,000

SEDGWICK COUNTY

31-28-1w Pendelum, Magnolia Pet. Co. 1 dry

Wells completed 1
Dry 1

STEVENS COUNTY

33-33-37w Hamm, Texas Interstate Pipe Line Co. 1 ..... gas
27-31-38w Wrench, Colorado Gas & Utility Corp. 1 ..... gas

Wells completed 2
Gas 1
Gas production 16,600,000

PANHANDLE FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Gray	4	255	0	1
Lubbock	1	0	1	0
Moore	2	760	0	1
Total Sept.	7	1,015	1	2
Total Aug.	8	180	2	4
Difference	1	835	1	2

Summary of Rigs and Wells Drilling

County—	Rgs.	S.D.	Drlg.	Ttl.
Carson	6	1	5	12
Gray	7	3	4	14
Hutchinson	1	3	2	6
Moore	3	0	2	5
Wheeler	0	1	0	1
Miscellaneous counties	0	4	2	6
Total Sept.	17	12	15	44
Total Aug.	14	17	9	40
Difference	3	5	7	4

WELLS COMPLETED
GRAY COUNTY

J. C. Short, Stekoll & Rieger 1..... 3[illegible]

W. C. Heaston, Magnolia Pet. Co. 1 .. abd
G. Simpson, C. Pulse et al 1 150
Morse, Finston trustee 2 85
Hughey, Humble O. & R. Co. 1 ..... gas
Combs & Worley, Wilcox-Pampa Oil 19 abd

Completions 4
Production 255
Gas 1

LUBBOCK COUNTY

Bowles Ranch, Center Oil Co. 1 ..... dry

MOORE COUNTY

C. R. Jones-A, Suray Oil Co. 1 700
C. R. Jones, Magnolia Pet. Co. 1 60

Completions 2
Production 760

NORTH CENTRAL TEXAS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Archer	8	325	7	0
Brown	4	6	1	2
Callahan	1	60	0	0
Clay	0	0	0	0
Coleman	4	264	2	0
Cooke	1	0	1	0
Eastland	2	0	2	0
Gray	1	0	1	0
Palo Pinto	5	40	0	4
Parker	1	0	1	0
Shackelford	1	0	1	0
Stephens	2	0	1	1
Throckmorton	1	0	1	0
Wichita	2	40	1	0
Wilbarger	1	0	1	0
Young	14	215	11	0
Total Sept.	48	950	31	7
Total Aug.	61	1,131	43	0
Difference	13	181	12	7

Summary of Rigs and Wells Drilling

County—	Rgs.	S.	D.	Dig.	Ttl.
Archer	5	3	8	16	
Brown	0	1	5	6	
Callahan	0	1	2	3	
Coleman	1	7	3	11	
Cooke	2	1	2	5	
Clay	0	1	0	1	
Eastland	0	0	3	3	
Erath	0	1	1	2	
Jack	2	1	0	3	
Palo Pinto	0	4	6	10	
Shackelford	0	1	1	2	
Stephens	0	1	1	2	
Throckmorton	1	1	0	2	
Wichita	9	2	3	14	
Wilbarger	1	2	0	3	
Young	3	4	14	21	
Miscellaneous counties	2	10	4	16	
Total Sept.	26	41	53	120	
Total Aug.	20	38	41	99	
Difference	6	3	12	21	

WELLS COMPLETED

ARCHER COUNTY

Belle Lyles, Frank J. Darr 2 ..... dry
H. K. Dycus, Frank Hutcheson 1 ..... dry
W. P. Ferguson, Shappell Oil Co. 1 ..... dry
Oil Inv. Co. (Gulf), Bridwell Oil 19 ..... abd
Bridwell, Geo. W. Cooper 1 ..... dry
Coleman, Fraser et al 2 ..... dry
Wilson, Lindsey Drlg. Co. 1 325
Edwards, McKanna et al 1 ..... dry

Completions 8
Production 325
Dry 7

BROWN COUNTY

L. W. McDonald, Van Bibber & Troutt 1 gas
L. W. McDonald, Van Bibber & Troutt 2 dry
Whitehead, Spinney et al 1 6
McDonald, Van Bibber & Troutt 3 ..... gas

Completions 4
Production 6
Dry 1
Gas 2

CALLAHAN COUNTY

Alexander, Producing Purchasers 4 60

CLAY COUNTY

T. C. Thornberry, Premier O. & G. 1 ... abd

COLEMAN COUNTY

A. J. Cannon, Arcadia Ref. Co. 1 6
Mrs. N. D. Newton, Continental O. & G. Co., Inc. 4-A 258
Beaver, Carmichael et al 1 ..... dry
McClure, Foster et al 1 ..... dry

Completions 4
Production 264
Dry 2

COOKE COUNTY

Jones, Lan Dev. Oil Co. 1 ..... dry

EASTLAND COUNTY

Allen Morton, Bert Mays et al 1 ..... dry
M. Williamson-A, Mook-Texas Oil Co. 1 dry

GRAYSON COUNTY

M. A. Nichabs, F. H. E. Oil Co. 1 ..... dry

PALO PINTO COUNTY

F. E. Harrison, Brazos River Gas Co. 2 gas
N. C. Vernon, Burton & McKee Oil Co. 1 gas
Hotch, Hoffman & Page Co. 1 ..... gas
Ready, Wickers et al 1 45

Completions 5
Production 45
Gas 4

PARKER COUNTY

Williams & Pickens, Cook & Muller 1 .. abd

SHACKELFORD COUNTY

J. N. Gray, Fred Poole et al 1 ..... dry

STEPHENS COUNTY

C. J. Winston, Coulson, Beatty & Bond 1 gas
W. E. Smith, Loftin, Jordan et al 1 .. dry

THROCKMORTON COUNTY

Lester, J. T. Cumley 1 ..... abd
R. Parker et al-B, J. L. Swanner 4 .... dry
Logan, Jack H. Martin 1-A 40

Completions 2
Production 40
Dry 1

WILBARGER COUNTY

Waggoner-S, Waggoner Ref. Co. 1 ..... dry

YOUNG COUNTY

Belknap Coal Co., C. E. Beavers et al 8 dry
G. W. Terrell est., A. B. Bissey 1 ..... dry
W. T. Finch-B, O. Bratcher 1 ..... dry
G. W. Terrell, Mason & Fitzgerald 2 ... abd
B. H. Larimore et ux, Geo. Mollenkoph 6 dry
G. W. Terrell, Routon & Lowe 1 ..... dry
Martha Donald, A. Shamlin 1 ..... dry
McGee, Turner 1 ..... dry
G. W. Terrell est., R. J. Watson 2 ... abd
M. Cox, Brazos River Gas Co. 1 ..... abd
Howard, F. E. Butler et al 1 ..... dry
Howard, J. J. Moran 4 30
Belknap, Sheldon & Shaw 2 35
Belknap, Swink & Smith 3 150
Watson, R. J. Watson 8 ..... dry
Chandler, Wheeler & Brashear 1 ..... dry

Completions 14
Production 215
Dry 11

EAST TEXAS FIELDS

Summary of Field Operations

County—	Comp.	Prod.	Abd.	Gas	Rgs.	Dig.	Ttl.
Anderson	0	0	0	0	1	1	2
Angelina	2	0	2	0	0	0	0
Cherokee	0	0	0	0	1	4	5
Bowie	0	0	0	0	0	4	4
Delta	0	0	0	0	0	1	1
Ellis	0	0	0	0	1	2	3
Fannin	0	0	0	0	0	2	2
Freestone	0	0	0	0	1	0	1
Gregg	133	*16,801	3	0	103	245	348
Henderson	1	0	1	0	0	1	1
Hill	0	0	0	0	0	3	3
Hopkins	0	0	0	0	0	2	2
Houston	0	0	0	0	2	6	8
Hunt	0	0	0	0	3	2	5
Kaufman	0	0	0	0	0	1	1
Lamar	0	0	0	0	2	3	4
Leon	0	0	0	0	0	4	4
Morris	0	0	0	0	0	1	1
Nacogdoches	3	0	3	0	2	9	11
Polk	0	0	0	0	4	1	5
Rains	0	0	0	0	0	1	1
Red River	0	0	0	0	2	4	6
Robertson	0	0	0	0	0	2	2
Rockwall	0	0	0	0	0	1	1
Rusk	128	*19,159	5	0	72	153	225
Sabine	0	0	0	0	1	0	1
San Augustine	0	0	0	0	1	0	1
Smith	11	*1,713	0	0	5	7	12
Titus	0	0	0	0	0	3	3
Tyler	0	0	0	0	0	2	2
Upshur	23	*2,398	1	0	17	36	53
Van Zandt	1	*120	0	0	0	9	9
Wood	2	0	2	0	3	1	4
Ttl. Sept.	304	40,191	17	0	221	510	731
Ttl. Aug.	283	62,510	11	0	243	437	680
Difference	79	22,319	6	0	22	73	51

*Initial production figures represent first hour's production through chokes of various sizes of the well that were gauged. A considerable number of wells were not gauged, the oil having been turned into tanks for a short period without any flow record having been taken, after which the wells were shut in until the next production period.

WELLS COMPLETED

ANGELINA COUNTY

Pollock Oil Co., No. 1 Sessions ..... abd
R. O. Moore, No. 1 Abney est. ..... abd

Abandoned 2

GREGG COUNTY

	Bbls. prod. first hr.
J. G. Beard, No. 1 Muckelroy, through open tubing	152
Clark and Kinnebrews, No. 1 Register, through ¾-in. tubing choke	120
Cranfill & Reynolds, No. 1 Davis, estimated through open tubing	200
Delaney & Stoddard, No. 1 Smith, through ¾-in. tubing choke	125
Golding & Cochran, No. 1 S. Smith, through open tubing	200
Houston Oil Co. and Heep Oil Co., No. 1 Cole	abd
Lambert & Hines, No. 1 Hilburn, through ⅝-in. tubing choke	110
Magnolia Pet. Co., No. 4 King, through ⅝-in. tubing choke	80
Shell Pet. Corp., No. 3-A Douglass, through ¾-in. tubing choke	110
Tidal Oil Co., No. 6 Blackman, through ⅝-in. tubing choke	105
Tidal Oil Co., No. 1 Strong, through open tubing	200
Atlantic Oil Prod. Co., No. 1 Hughey, through 2½-in. tubing	210
Humble O. & R. Co., No. 1 Knowles through ¾-in. tubing choke	108
Shell Petroleum Corp., No. 1-B Douglass, through 2½-in. tubing	125
Shell Petroleum Corp., No. 1-B Elder, through 2½-in. tubing	175
C. S. Thomas et al, No. 1 Davis, through 2½-in. tubing	170
Valentine Oil Co., No. 1 Hilburn, through 2½-in. tubing	185
Gulf Production Co., No. 1 Neeley et al, through ¾-in. tubing	138
Barnsdall Oil Co., No. 7, on 1-in. choke	116
Oscar Breeding et al, No. 1 Adams, on 4/64-in. choke	11
Byrd-Frost, Inc., No. 1 Rysond, through 4/64-in. choke	25
Gulf Production Co., No. 1 Anderson, through ¾-in. tubing choke	186
Magnolia Petroleum Co., No. 1 Fonville, on 4-in. line	126
Shasta Oil Co., No. 1 Rickey, through ¾-in. tubing choke	72
Shell Petroleum Corp., No. 2 Jones, on 2½-in. open tubing	220
Shell Petroleum Corp., No. 1 Moore, on 2½-in. open tubing	196
Stanolind Oil & Gas Co., No. 3 Wilhite, on 2½-in. tubing	200
Vacuum Oil & Gas Co., No. 2 Zigler, through 11/16-in. tubing choke	114
Atlantic Production Co., No. 1 H. M. Myers	(*)
Delaney & Stoddard, No. 1 McKinley	(*)
East Texas Refining Co., No. 2 Hindman	(*)
Empire Gas & Fuel Oil Co., No. 1 Joe Bender	(*)
Empire Gas & Fuel Oil Co., No. 2 Rogers	(*)
Fain & McGaha, No. 1 Rosa Corbin	(*)
F.H.E. Oil Co., No. 2 J. Flemister	(*)
F.H.E. Oil Co., No. 1 Jones	(*)
Gulf Production Co., No. 4 Tom Clemen, through ¾-in. tubing choke	178
Magnolia Petroleum Co., No. 1 A. J. Green	(*)
Margay Oil Co., No. 2 Rosa Corbin	(*)
Premier Oil Co., No. 1 Matthews	(*)
Shell Petroleum Corp., No. 1 Jones	(*)
Shell Petroleum Corp., No. 2 Ritchey	(*)
Louis Sikes et al, No. 1 L. A. Rodden	(*)
J. E. Stock et al, No. 1 Doby	(*)
Texota Corp., No. 1 Mollie Fenn	(*)
The Texas Company, No. 2 G. W. Clark	(*)
Alma Petroleum Co., No. 1 Cox	125
Alma Petroleum Co., No. 1 Stokes, on 1-in. tubing choke	120
Arkansas Fuel Oil Co., No. 1 Clemens, on ¾-in. tubing choke	90
Arkansas Fuel Oil Co., No. 2 Orms, on 2½-in. tubing choke	210
Danciger Oil & Refining Co., No. 1 Christian, through 2½-in. tubing	100
Danciger Oil & Refining Co., No. 2 Clemens, through open casing	340
Deep Rock Oil Co., No. 1 Tooke, through 2½-in. open tubing	176
Dinham Oil Co., No. 1 McGrede	abd
W. R. Duke et al, No. 1 Boles, through 4/64-in. choke	10
East Texas Refining Co., No. 1 Christian, through 1-in. tubing choke	106
Fritz et al, No. 1 Anderson, on 1-in. tubing choke	130
Gulf Production Co., No. 3 Fishburn, on ¾-in. tubing choke	150
Keyser & Heard, No. 2 Hindman, on 1-in. tubing choke	137
Houston Oil Co., No. 2 Bauknight, on ¾-in. tubing choke	105
Humble Oil & Refining Co., No. 2 Christian, on ¾-in. tubing choke	129
Humble Oil & Refining Co., No. 1 Harris, 3 hrs. on ¾-in. tubing choke	253
Humble Oil & Refining Co., No. 1 Killingsworth, on ¾-in. tubing choke	102
Inland Oil Co., No. 1-B Fenn, on 1-in. tubing choke	109
Payne Oil Co., No. 1 Isley, 3 hrs. on ½-in. tubing choke	225
W. R. Jones, No. 1 Doby, through tubing and casing	224
Kilgore, Barton & Hanson, No. 1 Colburn, 2 hrs. on 20/64-in. tubing choke	77
Lake Oil Co., No. 1 Thad Snoddy, on 1-in. tubing choke	185
Magnolia Petroleum Co., No. 1 Dyers, on 1-in. tubing choke	180
Magnolia Petroleum Co., No. 2 Dyers, on 1-in. tubing choke	180
Magnolia Petroleum Co., No. 2 Green, on 1-in. tubing choke	150
Magnolia Petroleum Co., No. 2 Richey, through 2½-in. tubing choke	211
Magnolia Petroleum Co., No. 3 Richey, on 2½-in. tubing open	211
Stanolind & Simms Oil Co., No. 1 Fonville, on ¾-in. tubing choke	121
Barnsdall Oil Co., No. 4 Smith, through 2½-in. tubing choke	110
Gulf Production Co., No. 1 Mary Charles, on 42/64-in. choke	93
Lion Oil & Refining Co., No. 1 A. A. King, 2 hrs. through 2½-in. tubing choke	225
Magnolia Petroleum Co., No. 1 Sam Carr, through 1-in. tubing choke	190
Shell Petroleum Corp., No. 12 J. R. Watson, through open tubing	235
Shell Petroleum Corp., No. 3 E. W. Willoughby, through open tubing	183
Sutton & Hawkins, No. 1 Whittaker, through 2½-in. tubing	190
Sutton & Hawkins, No. 2 Whittaker, through open tubing	241
The Texas Company, No. 3 Clark, on 2½-in. tubing choke	200
The Texas Company, No. 2 Woods, on 2½-in. open tubing	205
Tidal Oil Co., No. 2 Jones, through open tubing	181
L. H. Wentz Oil Corp., No. 1 Richey, on 8/64-in. tubing choke	15
Whellington et al, No. 1 Boyle	200
Y. Oil & Gas Co., No. 1 Kinsell, on ¾-in. tubing choke	135
Yount Lee Oil Co., No. 1 Calvin, on 11/16-in. tubing choke	90
Yount Lee Oil Co., No. 2-B Fenton, on 11/16-in. tubing choke	74
Yount Lee Oil Co., No. 2 Hopkins, on 11/16-in tubing choke	95
Yount Lee Oil Co., No. 1 Mary McKinley, on 11/16-in. tubing choke	85
Yount Lee Oil Co., No. 1-A Smith, on 11/16-in. tubing choke	100
Yount Lee Oil Co., No. 1-B Thad Snoddy, on 11/16-in. tubing choke	89
Yount Lee Oil Co., No. 2 Stephens, on 11/16-in. tubing choke	95
Arkansas Fuel Oil Co., No. 1 Christian, on 2½-in. tubing	220
Barnsdall Oil Co., No. 6 McGrede, on 1-in. tubing choke	123
Houston Oil Co., No. 2 Clemens, through ¾-in. tubing choke	90
Humble Oil & Refining Co., No. 2 Boles, through ¾-in. tubing choke	121
Humble Oil & Refining Co., No. 2 Carter, 3 hrs. through ¾-in. tubing choke	240
Humble Oil & Refining Co., No. 3 Carter, 2 hrs. through ¾-in. tubing choke	107
Humble Oil & Refining Co., No. 2 Harris, 2 hrs. through ¾-in. tubing choke	243
Lester & Duffield, No. 1 McKinley, through 2½-in. tubing	200
Magnolia Petroleum Co., No. 2 Everett, through 1-in. tubing choke	198
Magnolia Petroleum Co., No. 3 Everett, through 1-in. tubing choke	200
Shell Petroleum Co., No. 1 Salters, through 1-in. tubing choke	180
Sinclair Oil & Gas Co., No. 1 Salters, through 1-in. tubing choke	180
Sinclair Oil & Gas Co., No. 2 Akin, through 2½-in. tubing choke	190
Atlantic Oil & Production Co., No. 1 Duncan, on 11/16-in. tubing choke	94
Bishop Oil Corp., No. 1 Todd, on ¾-in. tubing choke	95
Byrd-Frost, No. 1 Adams, through ¾-in. tubing choke	105
Citizens Oil Co., No. 1 School Lot, through 1-in. tubing choke	133
Delaney & Stoddard No. 2 McKinley, through ¾-in. tubing choke	96
East Texas Refining Co., No. 1 Castleberry, through 2½-in. tubing	180
Hamil & Smith, No. 2 Meyers, through 1-in. tubing choke	170
P. L. Hoffman et al, No. 1 Meyers, through 1-in. tubing choke	179
Mook-Texas Oil Co., No. 2 Rodden, through ¾-in. tubing choke	94
National Oil Co., No. 1 Johnson, through ¾-in. tubing choke	110
Petroleum Pipe Line Storage Co., No. 1 Kay, through 1-in. tubing choke	186
Petroleum Pipe Line Storage Co., No. 1 Tenery, through 1-in. tubing choke	175
Roeser & Pendleton, No. 2 Satterwhite, through 2½-in. tubing	190
Sinclair Oil & Gas Co., No. 3 Akin, through 2½-in. tubing	185
Yount Lee Oil Co., No. 1 McGrede, through 11/16-in. tubing choke	90
Atlantic-Byrd, No. 4 S. G. Andrews, through open tubing	190
Gulf Production Co., No. 4 S. G. Andrews, through ¾-in. tubing choke	85
Gulf Production Co., No. 2 S. B. Hall, through ¾-in. tubing choke	114
Gulf Production Co., No. 2 M. T. Cole, through ¾-in. tubing choke	115
Magnolia Petroleum Co., No. 3 L. A. Griffin, ¼ hr.	148
Magnolia Petroleum Co., No. 2 W. B. Goyne	abd
Mullendore & Berry, No. 1 A. Spear, through open tubing	225
Shell Petroleum Co., No. 2-B Douglass, ¾ hr.	54
Shell Petroleum Co., No. 2 J. S. King, through 2½-in. tubing choke	180
The Texas Company, No. 1 R. B. Walls	170

Completed wells 133
Abandoned wells 3
Initial 1 hour's production 16,801

*No gauge.
Initial production based on various chokes shown on this report.

HENDERSON COUNTY

Westside Investment Co., No. 1 Thornhill ..... abd

Abandoned wells 1

NACOGDOCHES COUNTY

Burke et al, No. 1 Patterson ..... abd
Burton et al, No. 1 Reece ..... abd
L. E. Trout Oil Co., No. 1 E. A. Blount abd

Abandoned wells 3

RUSK COUNTY

	Bbls. prod. first hr.
E. L. Chapman, No. 2 Russell, through 9/16-in. choke	65
Humble Oil & Refining Co., No. 38 Crim, through ¾-in. choke	100
Humble Oil & Refining Co., No. 42 Crim, through ¾-in. tubing choke	100
Lewis Production Co. and Selby Oil & Gas Co., No. 1 Bean, through open tubing	100
Magnolia Petroleum Co., No. 1 Barton, through open tubing	235
Mills Bennett, No. 7 Brightwell, through ⅝-in. tubing choke	130
Gulf Production Co., No. 7 Jernigan, through ¾-in. tubing choke	110
Humble Oil & Refining Co., No. 43 Crim, through ¾-in. tubing choke	74
Nat. Hunter, No. 2-A Buntyn, through 2½-in. tubing	300
Wheelock & Collins, No. 1 Wells, through 2½-in. tubing choke	100
Golding & Murchison, No. 1 Fain, through open tubing	165
Gulf Production Co., No. 4 Murphy, through open tubing	120
Humble Oil & Refining Co., No. 5 Blackwell, through tubing	154
Humble Oil & Refining Co., No. 7 Blackwell, ½ hr. through open tubing	46
Humble Oil & Refining Co., No. 1 Crim, through ¾-in. tubing choke	85
Humble Oil & Refining Co., No. 1 Holt, through ¾-in. tubing choke	85
Humble Oil & Refining Co., No. 2-B Holt, through ¾-in. tubing choke	75
Humble Oil & Refining Co., No. 4 Key, through ¾-in. tubing choke	95
Humble Oil & Refining Co., No. 4 Silvey, through ¾-in. tubing choke	110
Humble Oil & Refining Co., No. 4 Thompson, through 1-in. tubing choke	83
Humble Oil & Refining Co., No. 5 Wooley, through open tubing	130

H. L. Hunt, No. 1-D Fair, open through tubing 235
Lion Oil & Refining Co., No. 5 Brookes, through open tubing 50
Stanolind Oil & Gas Co., No. 4 O'Quinn, 1¼ hrs. through open casing and tubing 156
Grady Vaughn, No. 1 Alford ..... (*)
Etnyre Petroleum Co., No. 1 Giles .... (*)
Humble Oil & Refining Co., No. 1 Thompson, through 1-in. tubing choke 124
Humble Oil & Refining Co., No. 1 Walker, through open tubing 103
Imperator Oil Co., No. 1 Cox ..... (*)
Imperator Oil Co., No. 1 Johnson .... abd
Magnolia Petroleum Co., No. 1 Mason. (*)
A. W. Phillips, No. 1 Deason ..... (*)
Thompson & Bean, No. 1 Alford, 5 hrs. on pump 65
Ward Oil Co., No. 3 Thrash, through ½-in. tubing choke 60
Sun Oil Co., No. 2 Henson ..... (*)
British American Oil Co., No. 1 Stone, through open tubing 150
Gulf Production Co., No. 1 Shaw, through open tubing 155
Gulf Production Co., No. 1 Stone, through open tubing 150
Gulf Production Co., No. 2 Wiley 170
Humble Oil & Refining Co., No. 1 Arnold, through ¾-in. tubing choke ... 72
Humble Oil & Refining Co., No. 1 Lula Barton, through ¾-in. tubing choke.. 112
Humble Oil & Refining Co., No. 3 First State Bank 94
Humble Oil & Refining Co., No. 3 Glover, through ¾-in. tubing choke. 114
Humble Oil & Refining Co., No. 3 W. B. Key, through ¾-in. tubing choke. 105
Humble Oil & Refining Co., No. 2 J. W. Turner 66
W. B. Hamilton, No. 1 Thompson .... abd
H. L. Hunt, No. 3 Plowman ..... (*)
Kirby Petroleum Co., No. 1 Gramaling, through open tubing 190
Magnolia Petroleum Co., No. 4 Eaton, ½ hr. through open tubing and casing 110
J. J. O'Hearn, No. 3 McMillan, through ¾-in. tubing choke 94
Petroleum Marketing Co., No. 1 M. M. Barksdale, through open casing and tubing 420
R.M.V. Oil Co., No. 2 Birdwell, through pinched tubing 225
Stanolind Oil & Gas Co., No. 6 O'Quinn, through 1½-in. tubing choke 146
Tidal Oil Co., No. 4 Pinkston, 1½ hrs. through open tubing 225
Wade Reynolds, No. 1 Brett, through open tubing 170
Mills Bennett, No. 7 Brightwell, through ¾-in. tubing choke 130
Gulf Production Co., No. 6 Birdsong, through ¾-in. tubing choke 125
Gulf Production Co., No. 4 Brightwell, through ¾-in. tubing choke 119
Gulf Production Co., No. 7 Jernigan, through ¾-in. tubing choke 110
Houston Oil Co., No. 3 Thompson, through 1-in. tubing choke 94
Humble Oil & Refining Co., No. 29 Crim, through ¾-in. tubing choke 100
Humble Oil & Refining Co., No. 44 Crim, through ¾-in. tubing choke 127
Nat Hunter, No. 2-A Buntyn, through 1½-in. tubing 300
Killum & Phillips, No. 2 Brooks heirs, through open casing 600
Wheelock & Collins, No. 1 D. Wills, through ¾-in. tubing choke 100
Dapoil, No. 1-A Barksdale, through open tubing 180
East Texas Refining Co., No. 1 O'Quinn, ¾ hr. through open tubing 220
Hill & Henry, No. 1 Alford, through open casing 65
Humble Oil & Refining Co., No. 3 Blackwell, through ¾-in. tubing choke .. 108
Humble Oil & Refining Co., No. 2 C. O. Crim, through 1½-in. tubing choke.. 101
Humble Oil & Refining Co., No. 2-A Ida Holt, through ¾-in. tubing choke ... 71
Humble Oil & Refining Co., No. 3-A Holt, through ¾-in. tubing choke .. 112
Humble Oil & Refining Co., No. 1 O. R. Holt, through ½-in. tubing choke .. 74
Humble Oil & Refining Co., No. 2 O. R. Holt, through ¾-in. tubing choke ... 106
Humble Oil & Refining Co., No. 1-B Kangerga, through 1-in. tubing choke 51
Humble Oil & Refining Co., No. 3 J. W. Turner, through ¾-in. tubing choke. 113
Humble Oil & Refining Co., No. 4 A. L. Walker, through ¾-in. tubing choke. 105
Humble Oil & Refining Co., No. 4 J. E. Whellis through ¾-in. tubing choke 119
Humble Oil & Refining Co., No. 1 J. H. Wooley, through ¾-in. tubing choke. 107
H. L. Hunt, No. 1 Barksdale, through open tubing 120
Lucy Petroleum Co., No. 3 Maxwell.... 156
Brown & Wilson, No. 2 M. R. Terrell, through ¾-in. tubing choke 125
Gulf Production Co., No. 1 Florence, through ¾-in. tubing choke 113
Heep Oil Co., No. 1 Jernigan, through ¾-in. tubing choke 125
Mid-Kansas Oil & Gas Co., No. 1 M. M. Cross, through ¾-in. tubing choke ... 121
Mid-Kansas Oil & Gas Co., No. 1 Mason 225
Mid-Kansas Oil & Gas Co., No. 2 Joe Mills, 24 hrs. 225
Mid-Kansas Oil & Gas Co., No. 2 E. E. Moore, 24 hrs. 224
Prairie Oil & Gas Co., No. 4 Wilson, through ¾-in. tubing choke 135
Tidal Oil Co., No. 3 Thompson, through open casing 357
Humble Oil & Refining Co., No. 11-B S. S. Laird 47
Humble Oil & Refining Co., No. 2-A Sexton, through ¾-in. tubing choke.. 47
Magnolia Petroleum Co., No. 7 W. P. Moore, ¼ hr. through 4-in. casing and ¾-in. choke on tubing 126
Magnolia Petroleum Co., No. 1 C. C. Still, ¼ hr. through 4-in. casing and ¾-in. tubing choke 135
Shell Petroleum Corp., No. 4 W. P. Moore, through 2½-in. tubing 160
Sinclair Oil & Gas Co., No. 1 Major Kennedy, pumping 325
British American, No. 1 Cooper 133
Jim Cloud, No. 3 Stone, through open tubing 140
Dapoil, No. 1 Barksdale 140
Duncan & Holt, No. 1 Cansler, 1½ hrs. 225
East Texas Refining Co., No. 2 Grissom, through open tubing 225
East Texas Refining Co., No. 1 J. B. Wilson 225
Gulf Production Co., No. 5 Murphy, through open tubing 165
Haynes Drilling Co., No. 3 Lee, through open tubing 170
Humble Oil & Refining Co., No. 4 Blackwell, through ¾-in. tubing choke ... 93
Humble Oil & Refining Co., No. 2 Caldwell, through ¾-in. tubing choke 114
Humble Oil & Refining Co., No. 4 J. E. Glover, through ¾-in. tubing choke .. 111
Humble Oil & Refining Co., No. 2 D. C. Joyner, through ¾-in. tubing choke. 95
Humble Oil & Refining Co., No. 3 W. P. Moore, through ¾-in. tubing choke.. 112
Gulf Production Co., No. 6 Jernigan, through ¾-in. tubing choke 129
Pace et al, No. 1 D. Wills, through ¾-in. tubing choke 84
Mid-Kansas Oil & Gas Co., No. 2 Cross, through open tubing 225
Owenwood Oil Co., No. 2 Mullins, through open tubing 120
Pansy Oil Co., No. 1 Minchew, through open tubing and casing 700
R.M.V. Oil Co., No. 3 Birdwell, through open tubing 250
Sinclair Oil & Gas Co., No. 3 F. B. Wilson, through open tubing 250
Staley & Winn, No. 1 Hale, through open tubing 65
Stanolind Oil & Gas Co., No. 5 O'Quinn, through 1½-in. tubing choke 136
A. M. Sutton et al, No. 1 Wilson, through ¾-in. tubing choke 90
The Texas Company, No. 3 Stone, through open tubing 145
Vitek Oil Co., No. 1 Irion ..... abd
Reagan et al, No. 1 G. Perry ..... abd
Humble Oil & Refining Co., No. 46 Crim, through ¾-in. tubing choke 111
Humble Oil & Refining Co., No. 8 Christian ..... abd
Humble Oil & Refining Co., No. 1 Christian, through ¾-in. tubing choke 105
Humble Oil & Refining Co., No. 2 M. N. Minor, through ¾-in. tubing choke .. 53
Humble Oil & Refining Co., No. 13 J. N. Peterson, through ¾-in. tubing choke 122
Tidal Oil Co., No. 2 J. S. King, through open tubing 2500

Completed wells 128
Abandoned wells 5
Initial 1 hour's production 19,159

*No gauge.
Initial production based on various chokes shown on this report.

SMITH COUNTY

	Bbls. prod. first hr.
H. L. Hunt, No. 5-D Fair, through open tubing	300
The Texas Company, No. 3 Wilson, through 1½-in. tubing choke	120
Gulf Production Co., No. 1 Wylie et al, through open tubing	152
Roy I. Carter, No. 1-B Wright	(*)
H. L. Hunt, No. 6-A Fair, through open tubing	300
Nash & Strickland, No. 1 Wright, through 26/64-in. tubing choke	31
Sun Oil Co., No. 1 T. O. Wright, through pinched tubing	225
Hoosier and Big Indian Oil Co., No. 1 Robertson, through 1½-in. tubing choke	60
Magnolia Petroleum Co., No. 8 J. R. Wright, ½ hr. through open casing.	233
The Texas Company, No. 4 Blackwell..	112
The Texas Company, No. 4 Wilson, open casing	180

Completed wells 11
Initial 1 hour's production 1713

*No gauge.
Initial production based on various chokes shown on this report.

UPSHUR COUNTY

	Bbls. prod. first hr.
Margay Oil Co., No. 1 Victory, through ¾-in. tubing choke	90
Humble Oil & Refining Co., No. 1 Watkins, 3 hrs. through ¾-in. tubing choke	169
Humble Oil & Refining Co., No. 1 Smith, 2 hrs. through ¾-in. tubing choke..	67
Humble Oil & Refining Co., No. 1 Edwards, estimated through ¾-in. tubing choke	85
B. L. Brookins, No. 1 Bland	(*)
Humble Oil & Refining Co., No. 1 O'Byrn, through ¾-in. tubing choke	35
Humble Oil & Refining Co., No. 1 Smith, through ¾-in. tubing choke	67
Humble Oil & Refining Co., No. 6 Edwards, through ¾-in. tubing choke..	80
Humble Oil & Refining Co., No. 1 Smith, 3 hrs. on ¾-in. tubing choke	283
Murphy et al, No. 1 Miller, through 2½-in. tubing	150
Murphy et al, No. 1 Watkins, through 2½-in. tubing	60
Humble Oil & Refining Co., No. 1 A. J. Watkins, 3 hrs. through ¾-in. tubing choke	169
Magnolia Petroleum Co., No. 6 Free ..	(*)
Arcadia Refining Co., No. 1 Phillips, through ¾-in. tubing choke	80
Glass Brothers, No. 1 Landers, through 1-in. tubing choke	100
Humble Oil & Refining Co., No. 2 Edwards, 2 hrs. through ¾-in. tubing choke	158
Magnolia Petroleum Co., No. 1 Adkins, through 2½-in. tubing	169
Rancho Oil Co., No. 1 Meyer, 2½ hrs. through 30/64-in. tubing choke	225
M. E. Bogle et al, No. 1 O'Byrne	abd
Humble Oil & Refining Co., No. 1 Mattox, through ¾-in. tubing choke	100
Magnolia Petroleum Co., No. 6 Hampton, through 2½-in. tubing	120
Shell Petroleum Corp., No. 1 Landers, through 2½-in. tubing	120
Tri-Company, No. 1 Free, through ¾-in. tubing choke	80

Completed wells 23
Abandoned wells 1
Initial 1 hour's production 2398

*No gauge.

WOOD COUNTY

Vitek Oil Co., No. 1 Rose Vogel ..... abd
Main Holding Co., No. 1 Thelma Wells abd

Abandoned wells 2

VAN ZANDT COUNTY

	Bbls. prod. first hr.
Pure Oil Co., No. 3 Miller, through 11/16-in. tubing choke	120

Wells completed 1
Initial 1 hour's production 120

WEST TEXAS FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Irion	1	0	1	0
Loving	12	603	0	0
Pecos	1	65	0	0
Reeves	1	0	1	0
Ward	2	40	0	0
Total Sept.	7	708	2	0
Total Aug.	32	3,828	16	0
Difference	25	3,120	14	0

Summary of Rigs and Wells Drilling

County—	Rgs.	S.D.	Dlg.	Ttl.
Crane	0	0	1	1
Ector	1	1	0	2
Fisher	0	0	3	3
Howard	0	0	1	1
Irion	0	5	1	6
Jones	1	0	2	3
Loving	2	7	2	11
Pecos	3	1	0	4
Reagan	0	1	0	1
Upton	0	1	2	3
Ward	4	12	9	25
Winkler	0	0	0	0
Miscellaneous counties	0	19	2	21
Total Sept.	11	47	23	81
Total Aug.	12	43	22	77
Difference	1	4	1	4

WELLS COMPLETED
IRION COUNTY

F. Tankersley, Straughan & Texannati Oil Co. 1 ..... dry

LOVING COUNTY

Ramsey et al, Pete Hoffman et al 3... 288
Wheat & Ramsey, H. W. Martin et al 2 315

Completions 2
Production 603

PECOS COUNTY

H. H. Butz, Messenger et al 1..... 65

REEVES COUNTY

Balmorhea Livestock Co., Humble O. & R. Co. 1 ..... dry

WARD COUNTY

M. L. Johnson, Beckley et al 1..... 25
J. F. York et al, Clide Bradford 1..... 15

Completions 2
Production 40

SOUTHWEST TEXAS FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Bruner	0	0	0	0	1	1	
Darst Creek	1	8,160	0	0	0	1	1
Dobrowolski	1	0	1	0	0	1	1
Chittim	0	0	0	0	0	1	1
Cartwright	0	0	0	0	0	1	1
Chapman	1	0	1	0	0	0	0
McFadden	0	0	0	0	0	2	2
Mirando	4	235	1	0	1	4	5
Pettus	0	0	0	0	0	3	3
Pryor	0	0	0	0	0	0	0
Saxet	1	158	0	0	0	1	1
Somerset	0	0	0	0	0	0	0
Slick	0	0	0	0	0	0	0
Schimmel	0	0	0	0	0	0	0
White Point	0	0	0	0	0	0	0
Miscellaneous	24	85	21	1	9	72	81
Total Sept.	32	8,638	24	1	10	87	97
Total Aug.	36	592	24	3	8	92	100
Difference	4	8,046	0	2	2	5	3

WELLS COMPLETED
DOBROWOLSKI POOL—BEXAR COUNTY

J. Halbardier, Swearingen and others 5..abd

KOHLER POOL—DUVAL COUNTY

Kohler, Humble Oil & Refining Co. 50. abd

DARST CREEK—GUADALUPE COUNTY

Sue Denman, Camp et al 1 8160

SAXET POOL—NUECES COUNTY

Maggie Harrell, Gulf Coast Oil Co. 1 .. 158

CHAPMAN POOL—WILLIAMSON COUNTY

Lawrence, Westbrook Oil Corp. A-8.... abd

JENNINGS-CUELLAR POOL—ZAPATA COUNTY

Cuellar, O. W. Killam B-43 100
Cuellar, O. W. Killam B-44 100

ESCOBAS-MUCKELROY POOL—ZAPATA COUNTY

Trevino, Trevino Oil Corp 10 85

Wells completed 1
Production 85
Dry 1

MISCELLANEOUS WILDCATS

Bexar County—
Knapick, Witherspoon Oil Co. 1 ..... abd
Caldwell County—
S. F. McMahon, Blount & Mills 1 ..... abd
Duval County—
Jose Garza, Coffee et al 1 ..... abd
Bishop Land & Cattle Co., Duval Oil Corp. 3 75
Fayette County—
Frank Florence, Port Arthur Co. 1 .... abd
Guadalupe County—
Anton Zoboroski, W. J. Walton 1 ..... abd
Kerr County—
Seiker-Mears, Evand & Gant 1 ..... abd
Lee County—
R. C. Saunders, Burt et al 1 ..... abd
McMullen County—
Shiner, Whall, Scherer et al 1 ..... abd
Medina County—
J. F. Riley, O. H. Fretolliere 1 ..... abd
Fritz Faseler, Yancy Dev. Co. 1 ..... abd
Milam County—
Dilbeck, Dil-Tex Oil Corp.'s 1 ..... abd
E. L. White, Wilson-Broach Co. 1 ..... abd
Schleicher County—
Allison, Teas & Ganty 1 ..... abd
Meador, Westyde & Moody Oil Corp. 1.. abd
Bart Page, George Wilson 1 ..... abd
Starr County—
Kelsey-Bass, Hooks & Weaver 1 10
Travis County—
A. F. Smith, Fritz Fuchs 1 ..... abd
Webb County—
Brunt, South Texas Production Co. 1-B abd
De la Garza, Southern Gas Utilities Co. 1 gas
Williamson County—
Fee, H. Fritz et al 1 ..... abd
Zapata County—
Bruni, O. W. Killam 1 ..... abd
F. Guerra, McCaldin, Owen & Newton.. abd
Juan V. Cuellar, Jr., et al, Penny Production Co. ..... abd

Wells completed 24
Production 85
Gas 10,000,000
Dry 21

GULF COAST FIELDS

TEXAS

Summary of Field Operations

Field—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Barbers Hill	3	1,830	1	0	0	14	14
Damon Mound	0	0	0	0	0	1	1
Hankamer	1	220	0	0	0	0	0
High Island	0	0	0	0	0	1	1
Hull	2	71	1	0	0	3	3
Humble	1	0	1	0	1	1	2
Lockwood	1	175	0	0	0	3	3
Lost Lake	0	0	0	0	0	1	1
Moss Bluff	3	100	2	0	1	3	4
Mykawa	0	0	0	0	0	1	1
Nash	0	0	0	0	0	1	1
Orchard	0	0	0	0	0	1	1
Pierce Jct.	0	0	0	0	0	2	2
Port Neches	0	0	0	0	0	1	1
Refugio	1	0	0	1	0	4	4
Miscellaneous	8	2,000	6	1	3	25	28
Total Sept.	20	4,396	11	2	5	62	67
Total Aug.	31	10,260	16	0	6	47	53
Difference	11	5,864	5	2	1	15	14

SOUTH LOUISIANA

Bayou Blue	1	0	1	0	0	1	1
Bayou Choctaw	0	0	0	0	0	1	1
Edgerly	1	0	1	0	0	0	0
Jennings	0	0	0	0	0	1	1
Hackberry	0	0	0	0	1	3	4
Lake Barre	0	0	0	0	1	1	2
Lake Grand Ecaille	1	0	1	0	1	0	1
Lake Pelto	0	0	0	0	0	1	1
Lockport	0	0	0	0	0	1	1
Stark	0	0	0	0	0	1	1
Vinton	1	4,000	0	0	0	0	0
Miscellaneous	3	0	3	0	0	7	7
Total Sept.	7	4,000	6	0	3	17	20
Total Aug.	8	4,700	5	0	3	17	20
Difference	1	700	1	0	0	0	0
Total Gulf Coast	27	8,396	17	2	8	79	87
Total Aug.	39	14,960	21	0	9	64	73
Difference	12	6,564	4	2	1	15	14

WELLS COMPLETED
TEXAS
BARBERS HILL—CHAMBERS COUNTY

Smith, Sinclair O. & G. Co. 3..... 1500
Anna Higgins, Sun Oil Co. 1..... 250
Winfree, The Texas Co. 2..... abd

Wells completed 1
Production 1838
Abandoned 1
HANKAMER—LIBERTY COUNTY
Boyt, Gulf Prod. Co. 5..... 220
HULL—LIBERTY COUNTY
Carr, Sun Oil Co. 8..... abd
Barrow, The Texas Co. 2..... 71

Wells completed 2
Production 71
Abandoned 1
HUMBLE—HARRIS COUNTY
House, The Texas Co. 25..... abd
LOCKWOOD—FORT BEND COUNTY
Lockwood & Sharp, Cullen & West and Gulf Prod. Co. 2-A 175
REFUGIO—REFUGIO COUNTY
O'Brien, Mission Drlg. Co. 1..... gas
MOSS BLUFF—LIBERTY COUNTY
Harrison, Texas Gulf Sulphur Co. 3..... 100

A. Z. Gardner, Texas Gulf Sulphur Co. 3 abd
Sargent, Texas Gulf Sulphur Co. ..... abd

Wells completed	3
Production	100
Abandoned	2

MISCELLANEOUS TEXAS

Brazoria County—
Thos. Alsbury Sur. No. 4, Nash, Cullen & West 1 ..... abd
Manvel—Belcher, The Texas Co. 1..... 2000

Burleson County—
J. M. McKean Sur., Harris, Reynolds Oil Co. 1 ..... abd

Hardin County—
Guidrey, D. O. Speights 1..... abd

Jackson County—
Edna—Rogers, Chicago Gulf Co. 1..... gas

Liberty County—
H. & T. B. Sur. No. 4, Bell, Tucker et al 1 ..... abd

Newton County—
A. L. Stewart Sur., Windham, R. T. Briscoe 1 ..... abd

Polk County—
A. Viesca Sur., Olliver, Sunshine Oil 1.. abd

Wells completed	6
Production	2000
Abandoned	6
Gas	1

LOUISIANA

BAYOU BLUE—IBERVILLE PARISH
Schwing, Standard Oil Co. 7 ..... abd

EDGERLY—CALCASIEU PARISH
Prairie Narronni, Pelican Nat. Gas 3... abd

LAKE GRAND ECAILLE—PLAQUEMINES PARISH
State, Humble O. & R. Co. 2..... abd

VINTON—CALCASIEU PARISH
Matilda Gray, Vinton Pet. Co. 11..... 4000

MISCELLANEOUS LOUISIANA

Iberia Parish—
Jefferson Island—Lake Peigneur 21 ... abd

Terrebonne Parish—
Bay St. Elaine—L. L. & E., The Texas Co. 1 ..... abd

Vermillion Parish—
Gueydan—Alliance Trust Co., Pure Oil Co. 1 ..... abd

Wells completed	3
Abandoned	3

ARKANSAS FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Chicot	0	0	0	0	0	1	1
Clay	0	0	0	0	0	1	1
Cleburne	0	0	0	0	0	1	1
Cleveland	0	0	0	0	1	0	1
Columbia	0	0	0	0	0	1	1
Crawford	0	0	0	0	0	1	1
Dallas	0	0	0	0	0	3	3
Drew	1	0	1	0	0	0	0
Hot Springs	0	0	0	0	0	1	1
Lawrence	0	0	0	0	1	0	1
Lincoln	0	0	0	0	0	1	1
Little River	0	0	0	0	1	0	1
Logan	0	0	0	0	0	1	1
Miller	0	0	0	0	0	1	1
Ouachita	0	0	0	0	0	2	2
Pike	1	0	1	0	0	2	2
Scott	0	0	0	0	0	2	2
Sebastian	1	0	1	0	0	0	0
Union	0	0	0	0	4	6	10
Van Buren	0	0	0	0	0	1	1
Washington	0	0	0	0	0	1	1
Yell	0	0	0	0	0	1	1
Ttl. Sept.	3	0	3	0	7	27	34
Ttl. Aug.	0	0	0	0	7	27	34
Difference.	3	0	3	0	0	0	0

WELLS COMPLETED
DREW COUNTY
6-13-7 Hardy, Co-Operative Dev. Co. 1. dry
PIKE COUNTY
11-8-23 Lee, E. R. Henderson 1..... dry
SEBASTIAN COUNTY
24-8-30 Girard, Ozark Nat. Gas Co. 1... dry

NORTH LOUISIANA

Summary of Field Operations

	Comp.	Prod.	Dry	Gas*	Rgs.	Dlg.	Ttl.
Bienville	1	0	1	0	0	0	0
Bossier	1	0	1	0	0	4	4
Caddo	1	0	0	1	0	5	5
Caldwell	0	0	0	0	0	2	2
Catahoula	0	0	0	0	0	1	1
Claiborne	0	0	0	0	0	1	1
DeSoto	0	0	0	0	0	6	6
LaSalle	0	0	0	0	0	1	1
Morehouse	1	0	0	1	1	0	1
Natchitoches	2	0	2	0	1	2	3
Ouachita	1	0	0	1	2	0	3
Rapides	1	0	1	0	0	0	0
Red River	0	0	0	0	0	2	2
Richland	3	0	1	2	7	5	12
Sabine	2	0	2	0	5	22	27
Tensas	0	0	0	0	0	2	2
Union	0	0	0	0	0	1	1
Vernon	0	0	0	0	0	1	1
Ttl. Sept.	13	0	8	5	16	55	71
Ttl. Aug.	14	1,787	5	6	17	53	70
Difference.	1	1,787	3	1	1	2	1

*Gas production: Caddo, 10,000,000 feet; Morehouse, 19,368,000 feet; Ouachita, 13,-168,000 feet; Richland, 61,342,000 feet; total, 104,660,000 feet.

WELLS COMPLETED
BIENVILLE PARISH
27-18-6 Atkins, Arcadia Drlg. Co. 1.... dry
BOSSIER PARISH
23-22-12 DeMoss, Flint River Oil Co. 1. dry

CADDO PARISH
10-18-16 Breard, Pyramid O. & G. 2... gas

Gas production 10,000,000

MOREHOUSE PARISH
21-20-4e Fee, Carbon Cons. 5 ..... gas

Gas production 19,368,000

NATCHITOCHES PARISH
28- 9-10 Collins, W. M. Coates 1..... dry
35-11-10 Cooper, J. W. Cooper et al 1.. dry

OUACHITA PARISH
49-20-4e Guthrie, Carbon Cons. 6 ..... gas

Gas production 23,950,000

RAPIDES PARISH
3-1n-3w Long Bell Lbr. Co., Pelican Nat. Gas Co. 1 ..... dry

RICHLAND PARISH
19-16-7e Baremore, Richland Op. Co. 1. dry
18-17-6e Rosengrant & Ducomb, Southern Carbon Co. 9 ..... gas
13-17-5e Faust Bros. Lbr. Co., United Carbon Co. 1 ..... gas

Gas production 61,342,000

SABINE PARISH
36-8-12 Sabine Lbr. Co., Houston-Sabine Prod. Co. 1 ..... dry
14-7-11 Duggan, Lyons & Neely 1..... abd
3-7-11 L. C. DeLatin, The Texas Co. 1. dry

EAST TEXAS (BORDER COUNTIES)
Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Bowie	0	0	0	0	0	4	4
Camp	0	0	0	0	0	1	1
Cass	1	0	1	0	1	8	9
Harrison	1	0	1	0	2	4	6
Marion	1	0	1	0	0	2	2
Panola	0	0	0	0	4	6	10
Red River	0	0	0	0	0	2	2
Shelby	0	0	0	0	0	2	14	16
Ttl. Sept.	3	0	3	0	9	41	50
Ttl. Aug.	4	0	4	0	11	40	51
Difference.	1	0	1	0	2	1	1

WELLS COMPLETED
CASS COUNTY
McNary Harris Sur., S. A. Irvin, John Nelson 1 ..... dry
HARRISON COUNTY
W. W. O. Stanfield Sur., Bolding, O. O. Olford et al 1 ..... dry
MARION COUNTY
W. J. Willis Sur., McGaughey, Hindeman & Rhondo 1 ..... dry

MISSISSIPPI

Summary of Field Operations

	Comp.	Prod.	Dry	Gas*	Rgs.	Dlg.	Ttl.
Adams	0	0	0	0	0	1	1
Clark	0	0	0	0	0	1	1
Hinds	0	0	0	0	3	3	6
Humphrey	0	0	0	0	0	1	1
Jasper	0	0	0	0	0	1	1
Monroe	0	0	0	0	0	2	2
Newton	0	0	0	0	1	0	1
Noxubee	0	0	0	0	0	1	1
Rankin	1	0	0	1	6	6	12
Scott	0	0	0	0	1	0	1
Warren	0	0	0	0	0	2	2
Webster	0	0	0	0	0	0	1
Winston	0	0	0	0	0	1	1
Ttl. Sept.	1	0	0	1	11	20	31
Ttl. Aug.	5	0	3	2	8	15	23
Difference.	4	0	3	1	3	5	8

*Gas production: Rankin County, 35,000,-000 feet.

WELLS COMPLETED
RANKIN COUNTY
12-5n-1e Webb, Muse & Muse 1..... gas

Gas production 35,000,000

KENTUCKY FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Warren	0	0	0	0	0	1	1
Barren	1	0	0	0	1	0	0
Ohio	2	25	0	1	2	24	26
Daviess	8	65	4	0	0	17	17
Hancock	0	0	0	0	0	6	6
McLean	0	0	0	0	0	7	0	7
Hart	0	0	0	0	0	14	14
Edmonson	0	0	0	0	0	1	1
Todd	0	0	0	0	0	1	1
Nelson	0	0	0	0	0	1	1
Hopkins	0	0	0	0	0	2	2
Muhlenberg	1	0	0	1	0	3	3
Taylor	0	0	0	0	0	1	1
Carroll	0	0	0	0	0	1	1
Webster	0	0	0	0	0	2	2
Greene	5	0	0	5	1	0	1
Cumberland	1	0	0	1	0	1	1
Wayne	1	5	0	0	0	0	0
Estill	3	3	1	0	0	0	0
Lawrence-Johnson	3	3	2	0	0	0	0
Johnson-Magoffin	1	5	0	0	0	0	0
Madison	0	0	0	0	0	1	1
Total Sept.	26	106	7	9	10	76	86
Total Aug.	15	203	7	4	9	89	98
Difference	11	97	0	5	1	13	12

WELLS COMPLETED
OHIO COUNTY
Hartford—Glen Westerfield, White, White & Calderwood 1 25
J. T. Griffith, Kentucky Nat. Gas 8.. gas

Wells completed	2
Production	25
Gas	1

BARREN COUNTY
Glasgow—Roger, John Denny & Co. 1.. gas
DAVIESS COUNTY
Owensboro—W. R. Jones, Hupp & Duff 2 20
W. R. Jones, Hupp & Duff 3 20
J. O. Neel, S. H. Russell & Co. 1 10
Myrtle Howard, Ellis & Ashby 3 15
Lulu Crow, S. H. Russell 1 ..... dry
I. J. Hazelrig, Brenner & Adams 1 ... dry
Less Evans, Crouse & Co. 1 ..... dry
Myrtle Smiser, S. A. Cobb & Co. 1 ... dry

Wells completed	8
Production	65
Dry	4

MUHLENBERG COUNTY
Greenville—Chestin Lee, Ellis & Young 1 gas
GREENE COUNTY
Greensburg—Center, Kentucky-Wisconsin O. & G. 1, 2 ..... gas
Leon Butler, George Howard & Co. 1, 2 ..... gas
Pierce School lot, J. G. Rayburn 1 ... gas

Wells completed	5
Gas	5

CUMBERLAND COUNTY
Burksville—Bob Harris, Hansbrough & Co. 1 ..... gas
WAYNE COUNTY
Monticello—Eli Phipps, Bain & Hogue 3 5
ESTILL COUNTY
Irvine—John Argrove, C. G. Sprowl 1.. 1
James Evans, Cox & Gabbard 7 ..... dry
Hiram Fowler, Edwards & Co. 1 2

Wells completed	3
Production	3
Dry	1

LAWRENCE-JOHNSON COUNTIES
District 11—Fred Walleman, Piney Oil & Gas 1 ..... dry
T. H. Burchett, Virginian Gasoline & Oil 5 3
Fred Kinner, Devonian Gas 1 ..... dry

Wells completed	3
Production	3
Dry	2

JOHNSON-MAGOFFIN COUNTIES
District 29—Elizabeth Conley, Hudson & Collins 19 5

TENNESSEE FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs.	Drg.	Ttl.
Putnam	0	0	0	0	0	1	1
Smith	0	0	0	0	0	1	1
Warren	0	0	0	0	0	1	1
Clay	0	0	0	0	0	2	2
White	0	0	0	0	0	1	1
Dickson	0	0	0	0	0	2	2
Lincoln	0	0	0	0	0	2	2
Overton	0	0	0	0	0	2	2
Chatham	0	0	0	0	0	1	1
Robertson	0	0	0	0	0	1	1
Total Sept.	0	0	0	0	0	14	14
Total Aug.	0	0	0	0	0	14	14
Difference	0	0	0	0	0	0	0

ROCKY MOUNTAIN AREA

COLORADO

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Arapahoe	0	0	0	0	0	2	2
Elbert	0	0	0	0	0	3	3
Fremont	0	0	0	0	0	14	14
La Plata	0	0	0	0	0	3	3
Larimer	0	0	0	0	1	10	11
Las Animas	0	0	0	0	1	3	4
Moffat	0	0	0	0	2	2	4
Morgan	0	0	0	0	3	3	6
Rio Blanco	0	0	0	0	0	4	4
Routt	0	0	0	0	1	2	3
Weld	1	600	0	0	4	7	11
Miscellaneous	0	0	0	0	0	28	28
Total Sept.	1	600	0	0	12	81	93
Total Aug.	0	0	0	0	7	83	90
Difference	1	600	0	0	5	2	3

WELLS COMPLETED
24-6n-61 Ida Johnson, Reiter-Foster Oil Co. 1 600

MONTANA

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Carbon	0	0	0	0	2	4	6
Carter	2	0	2	0	0	0	0
Cascade	0	0	0	0	0	2	2
Fergus	0	0	0	0	1	5	6
Glacier	3	0	0	3	1	13	14
Hill	0	0	0	0	1	3	4
Judith Basin	0	0	0	0	0	2	2
Liberty	1	0	1	0	1	7	8
Pondera	0	0	0	0	0	3	3
Rosebud	0	0	0	0	0	3	3
Teton	0	0	0	0	1	4	5
Toole	3	0	0	3	6	8	14
Miscellaneous	0	0	0	0	3	18	21
Total Sept.	9	0	3	6	16	72	88
Total Aug.	8	420	0	5	13	72	85
Difference	1	420	3	1	3	0	3

WELLS COMPLETED
3-37-4w Farbo, Oil Drillers, Ltd. 1 .... gas
34-33-2w Donovan, Five-Forty Oil Co. 2 gas
1-33-1w Dunham, Marimont Pet Co. 1. gas
13-36-5e McDowell, Liberty Gas Co. 1.. dry
33-36-5w State, L. B. O'Neil, Agt. 2... gas
11-35-5w State, L. B. O'Neil, Agt. 1... gas
32-36-5w Schneider, L. B. O'Neil, Agt... gas
7-8s-58 Numiman, Minn. Oil & Dev. 1 dry
8-8s-57 Ross Pet. Co. 1..... dry

Wells completed	9
Gas production	34,250,000
Dry and abandoned	3

WYOMING

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Big Horn	2	2,500	0	0	0	2	2
Carbon	0	0	0	0	1	9	10
Converse	1	250	0	0	1	3	4
Crook	0	0	0	0	1	0	1
Fremont	1	0	1	0	0	5	5
Hot Springs	0	0	0	0	0	2	2
Johnson	0	0	0	0	0	1	1
Lincoln	0	0	0	0	0	2	2
Natrona	0	0	0	0	2	9	11
Niobrara	0	0	0	0	0	2	2
Park	0	0	0	0	2	9	11
Sheridan	0	0	0	0	0	1	1
Sweetwater	0	0	0	0	2	5	7
Sublet	0	0	0	0	0	7	7
Uinta	0	0	0	0	0	6	6
Washakie	0	0	0	0	0	1	1
Weston	3	125	0	0	2	13	15
Total Sept.	7	2,875	1	0	11	77	88
Total Aug.	11	1,325	2	3	10	81	91
Difference	4	1,550	1	3	1	4	3

WELLS COMPLETED
20-46-63 Bradley-Manewal 10 20
23-36-64 McCullough, Wytex Oil Co. 7 .. 100
17-46-62 Egasco Operating Co. 14 5
33-34-92 Producers & Refiners 2 ..... dry
9-33-76 Whiteside, Continental Oil Co. 50 250
29-56-97 Govt., Utah Southern Oil 3 ...1500
29-56-97 Beartooth, Portland Asso. Inc. 1 1000

Wells completed	7
Production	2875
Dry and abandoned	1

NEW MEXICO

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Chaves	0	0	0	0	0	2	2
De Baca	0	0	0	0	0	2	2
Eddy	0	0	0	0	0	4	4
Lea	1	0	1	0	3	3	6
McKinley	0	0	0	0	0	7	7
Rio Arriba	0	0	0	0	0	3	3
San Juan	1	50	0	0	2	9	11
San Miguel	0	0	0	0	0	5	5
Torrance	0	0	0	0	0	2	2
Valencia	3	0	3	0	0	0	0
Miscellaneous	0	0	0	0	1	11	12
Total Sept.	5	50	4	0	6	48	54
Total Aug.	5	0	2	3	3	47	50
Difference	0	50	2	3	3	1	4

WELLS COMPLETED
5-6n-2e Harlan, Harlan et al 4 ..... dry
5-6n-2e Harlan, Harlan et al 5 ..... dry
27-7n-4w Santa Fe, Acme Dev. Co. 1 ... dry
36-22-14 Reserve Oil Co. 3 50
16-20-32 State, Western Drilling Co. 1 .. dry

Wells completed	5
Production	50
Dry and abandoned	4

UTAH

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Total Sept.	0	0	0	0	1	19	20
Total Aug.	0	0	0	0	1	19	20
Difference	0	0	0	0	0	0	0

EASTERN FIELDS

Summary of Completed Work

Field—	Comp.	Prod.	Dry	Gas
Allegany	9	24	0	1
Bradford	17	25	0	0
Venango-Clarion	8	8	2	3
Butler-Armstrong	3	1	0	2
Middle Field	6	5	0	0
Tioga-Wayne	26	0	15	11
Southwest Pennsylvania	5	6	1	2
Southeast Ohio	23	167	8	5
West Virginia	37	1	4	30
Total Sept.	134	237	30	54
Total Aug.	89	188	21	41
Difference	45	49	9	13

Summary of Work Under Way

Allegany	2	8	10
Bradford	4	21	25
Venango-Clarion	1	5	6
Middle Field	0	1	1
Tioga-Wayne	8	47	55
Southwest Pennsylvania	4	7	11
Southeast Ohio	7	20	27
West Virginia	13	52	65
Total Sept.	39	161	200
Total Aug.	42	152	194
Difference	3	9	6

WELLS COMPLETED
ALLEGANY
Fee, Ryder and Richmond Oil Corp. ... 2
Fee, Ryder and Richmond Oil Corp. ... 2
Kinley, Pure Penn Oil, Inc. 1
Fee, C. L. Wann et al .....pressure
Fee, A. H. Ashworth et al ..... gas
Childs, First Nat. Bank of Bolivar No. 18 5
Birtcil, First Nat. Bank of Olean..... 4
Fee, Gilligan and Dermitt 8
Fee, Carrier et al 2

Wells completed	9
Production	24
Gas	1
Pressure	1

BRADFORD
Fee, Forest Oil Corp. 1
Fee, Forest Oil Corp. 1
Freeman, Stuchel and Freeman 42 3
Fee, Lincoln and Brink 47 1
Johnson, J. H. Brahaney 2
Wright, Harding 2
Fee, South Penn Oil Co. 3

Franchot, Mrs. T. T. Fox .. 4
Degolier, Healey Pet. Corp. 1
Fee, K. R. Hankison pressure
Glenn, S. H. Elder & Co. 1
Melvin, South Penn Oil Co. 1
Borden, T. P. Thompson, Jr. pressure
Mitchell, Bradford Prod. Co., Inc. pressure
Dieter, Dieter Bros. 1
Fee, Myron W. Matson 2
O'Neil, Ball and Ryan 2

Wells completed 17
Production 25
Pressure 3

VENANGO-CLARION

Wise, United Natural Gas Co. 4,022 gas
Sporer, W. B. and F. E. Kapp 5 gas
Sporer, Raymond Sporer 2 gas
Fye, W. H. Master et al 2 6
Osmer, Rice and Thompson 7 dry
Osmer, Rice and Thompson 8 dry
Watson, Moses Karien 4 1
Griebel, Samuel Griebel 4 1

Completions 8
Production 8
Dry 2
Gas 3

BUTLER-ARMSTRONG

West, Ethridge and Garvin 6 gas
O'Donnell, Charles J. Waltman 2 1
Holley, Little, Holley et al 2 gas

Completions 3
Production 1
Gas 2

MIDDLE FIELD

Alexander, Kinley Oil Co. 1
Orvine, C. E. Potter 1
Grow, Grow Oil Co. pressure
D. & O., Irvine Oil Co. 13 1
Dunham, A. F. and W. N. Dunham 11 1
Lot 3,290, Hoskins, Reeder et al 91 1

Completions 6
Production 5
Pressure 1

TIOGA-WAYNE

Leslie, East Penn Dev. Co. gas
Fee, Belmont Quadrangle gas
Wilston, Penna. Realty & Investment Co. gas
Van Zile, Mellon, Pollack & Patterson Co. gas
Fair Ground, Penn United Gas Co. gas
Bensonburg, Williamsport Oil & Gas Co. gas
Weldy, Interstate Gas & Oil Co. dry
Pritcher, Williamsport Oil & Gas Co. gas
Cummings, Vaughn and Rose dry
VanDusen, Elkland Oil & Gas Co. dry
Frisby, Elkland Oil & Gas Co. dry
MacDowell, Tri-State Gas & Electric gas
Barcraft, North Branch Dev. Co. gas
Sedesky, Belmont Quadrangle gas
Geralds, Lyons et al dry
Adams, Fisher dry
Mitchell, Queen Flaherty dry
Munroe, Morgan and Amer dry
Towner, Standard Gas Co. dry
Bigelow, Lamoka Oil & Gas Co. dry
Kress, Cady et al dry
Engle, Cobblehill Oil & Gas Co. dry
Dellis, Decker et al dry
Miller, Tioga United Corp. dry
Chase, Natural Drlg. & Dev. Co. dry
Portville, Elmira Natural Gas Corp. gas

Completions 26
Dry 15
Gas 11

SOUTHEAST OHIO

COMPLETIONS

ASHLAND COUNTY

Horn, A. G. Talbot et al 4 dry

ATHENS COUNTY

Young, Standard Natural Gas Co. 1 gas
Stratton, John Walters et al 1 30

BELMONT COUNTY

Sampson, W. P. Wasmuth et al 1 2

LICKING COUNTY

Loughman, The Wehrle Co. 1 gas
Morrison, William Smith 1 dry

MEDINA COUNTY

Packard, E. R. Edson & Son Co. 18 10
Franks, E. R. Edson & Son Co. 24 10
Brown, Curtis and Eaken 5 2
Packard, E. R. Edson & Son Co. 19 90
Franks, E. R. Edson & Son Co. 25 20

MONROE COUNTY

Marsh, William E. Gerber et al 2 2
Fogle, J. E. Lumbadis et al 1 gas
Beardmore, Thomas Bros. et al 1 gas

MUSKINGUM COUNTY

Huff, Atha Oil Co. 1 dry

NOBLE COUNTY

Rowlands, Way Wickens et al 2 dry

PERRY COUNTY

Wilkins, Atha Oil Co. 1 gas

TUSCARAWAS COUNTY

Long, Ohio Falls Drlg. & Supply Co. 1 dry

VINTON COUNTY

Gibbons, Donahue et al 1 dry
Miller, Powers and Henry 1 dry

WASHINGTON COUNTY

Lisk, Homer Newhart et al 1 ½
Neuberger, George Chichester et al 3 ½
Morningstar, John T. Cleary et al 4 dry

WEST VIRGINIA

COMPLETIONS

BOONE COUNTY

Federal Coal Co., Godfrey L. Cabot 48 gas
Dickinson, Godfrey L. Cabot 5 gas
Central Trust Co., Godfrey L. Cabot 1 gas
Federal Coal Co., Pure Oil Co. 53 gas
Hill, Turtle Lick Gas Co. 1 gas
Powell heirs, Owens-Illinois Glass Co. 6 gas
Safe Deposit & Trust Co., Owens-Illinois Glass Co. 9 gas
Cabell, Owens-Illinois Glass Co. 1 gas
Myers, Owens-Illinois Glass Co. 1 gas
Federal Coal Co., Godfrey L. Cabot 47 gas

CABELL COUNTY

Swann, Larner Gas Co. P-86 gas
Swann, Carter Gas Co. 86 gas

CALHOUN COUNTY

Holbert, C. B. Lewis et al 1 gas
Richards heirs, Creed Barker et al 2 gas
Evans, Ed Smith et al 1 gas
Brannon, Crummies Creek Fuel Corp. 2 gas
Brannon, Crummies Creek Fuel Corp. 2 gas
Fling & Rider, Chemical Oil Co. 1 gas
Jackson, Park Bowser 4 gas
Hayhurst, Roy Waggoner 1 dry
Gunn, F. F. McIntosh 2 gas
Gainer, W. H. Bickel 1 dry

DODDRIDGE COUNTY

Stutler, W. L. Travis 1 gas

GILMER COUNTY

Lynch, Mud Lick Oil & Gas Co. 2 dry

HARRISON COUNTY

Post, Reserve Gas Co. 2 gas

KANAWHA COUNTY

Winifrede Co., Winifrede Co. 3 gas
Winifrede Co., Winifrede Co. 14 gas
Thomas, Winifrede Co. 18 gas

MARION COUNTY

Price, Victor Tennant 1 gas

MARSHALL COUNTY

Burley, The Mfrs. L. & H. Co. 1,975 gas

MINGO COUNTY

Cotiga Dev. Co., United Fuel Gas Co. 4,332 gas

PLEASANTS COUNTY

Ruckman, H. M. Adams et al 1 ⅛
Ruckman, H. M. Adams et al 1 ⅛

ROANE COUNTY

Tanney, I. L. Storts et al 1 gas

TYLER COUNTY

Holmes, C. R. Mitchell 7 dry

WAYNE COUNTY

Romk, Chartiers Oil & Gas Co. 2 1
Doss, Meabon and Huffman 1 gas

SOUTHWEST PENNSYLVANIA

COMPLETIONS

ALLEGHENY COUNTY

Minick, Harold Oil Co. 3 4

BEAVER COUNTY

McCoy, Hobbs Oil Co. 2 2

GREENE COUNTY

Coen, H. D. Freeland & Co. 1 gas

WASHINGTON COUNTY

Cain, Cloves Oil & Gas Co. 1 dry
Cain, Local Stock Co. 2 gas

CENTRAL OHIO FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Ashland	5	0	4	1	2	6	8
Lorain	3	0	1	2	3	5	8
Medina	7	195	1	1	1	3	4
Wayne	1	0	0	1	0	4	4
Holmes	1	0	0	1	0	1	1
Cuyahoga	0	0	0	0	1	1	2
Ashtabula	1	0	1	0	0	0	0
Richland	2	0	1	1	1	3	4
Coshocton	0	0	0	0	0	1	1
Summit	1	0	0	1	1	1	2
Licking	3	0	2	1	2	2	4
Muskingum	1	0	1	0	3	13	16
Athens	3	30	0	2	1	7	8
Tuscarawas	1	0	1	0	2	3	5
Stark	9	6	2	6	9	28	37
Fairfield	3	0	0	3	0	1	1
Knox	3	0	1	2	1	2	3
Guernsey	2	0	1	1	0	8	8
Belmont	2	0	1	1	1	5	6
Gallia	0	0	0	0	0	2	2
Scioto	0	0	0	0	0	2	2
Pike	0	0	0	0	0	2	2
Carroll	0	0	0	0	1	0	1
Columbiana	0	0	0	0	0	1	1
Total Sept.	48	231	17	24	29	101	130
Total Aug.	28	112	6	16	31	100	131
Difference	20	119	11	8	2	1	1

WELLS COMPLETED

ASHLAND COUNTY

Lake—David Horn, Stewart & Co. 1 dry
Jackson—Ira V. Culler, Ohio Fuel Gas 1-5,525 gas
Montgomery—H. W. Martin, Ohio Fuel Gas 1-5,521 dry
J. B. Shultz heirs, Commonwealth Gas Corp. 1 dry
Orange—N. S. Stackhouse, Ohio Fuel Gas 1-5,518 dry

Wells completed 5
Dry 4
Gas 1

LORAIN COUNTY

Columbia—John Tomes, Ohio Fuel Gas 2-5,538 gas
W. R. Squires, Dillon & McFredericks 1 dry
W. M. Klooz, McMillan & Co. 2 gas

Wells completed 3
Dry 1
Gas 2

MEDINA COUNTY

Chatham—G. W. Packard No. 1, Edson Sons Co. 18 75
G. W. Packard No. 1, Edson Sons Co. 19 50
Marcus A. Frank, Edson Sons Co. 26 50
H. Broadsword, Curtis & Eaken 3 18
Thos. Brown, Jr., Curtis & Eaken 6 3
Homer—J. A. Holshoe, Barnhart & Co. 1 dry
Litchfield—W. Barton, Ramage & Willis 2 gas

Wells completed 7
Production 195
Dry 1
Gas 1

WAYNE COUNTY

Cannan—Mary Notestone, Ohio Fuel Gas 3-4,347 gas

HOLMES COUNTY

Monroe—F. C. Close, Lydic Oil & Gas 2 gas

ASHTABULA COUNTY

Jefferson—E. D. Trayer, Ross Riggs & Co. 1 dry

RICHLAND COUNTY

Miflin—Wm. Hines, Harmon & George 1 dry
Worthington—Leach Cleve, Ohio Fuel Gas 1-5,366 gas

Wells completed 2
Dry 1
Gas 1

SUMMITT COUNTY

Bath—Shiltz & Bailey, Wiser Oil 1 gas

LICKING COUNTY

Hanover—J. F. Morrison, William Smith 1 dry
Bennington—Darwin Fidler, Emerald Petroleum 1 dry
Hopewell—Hartman-Laughman, Emerald Petroleum 1 gas

Wells completed 3
Dry 2
Gas 1

MUSKINGUM COUNTY

Wayne—Richard Huff, The Atha Co. 1. dry

ATHENS COUNTY

York—M. & M. Stratton, John Walters & Co. 1 30
Waterloo—Almeda Young, Standard Natural Gas 5 gas
Lodi—W. M. Harris, Fairfield Gas Co. 1 gas

Wells completed 3
Production 30
Gas 2

TUSCARAWAS COUNTY

Clay—Harry Long, Ohio Falls Drilling & Supply 1 dry

STARK COUNTY

Lawrence—J. Kostalink, Wittmer Oil & Gas 1 dry
Mary J. Shannon, Wittmer Oil & Gas 1 6
Osnaburg—Moock & Czeck, DeWalt & Co. 1 dry
Jackson—Chas. H. Young, Ohio Fuel Gas 1-5,522 gas
Jac. D. Yost, Ohio Fuel Gas 1-5,535 gas
Louis A. Firestone, Wiser Oil 1 gas
W. Rudy & Co., Smith & Co. 1 gas
Lake Cable Co., Brendall & Co. 4 gas
Jacob Cockley, Brendall & Co. 1 gas

Wells completed 9
Production 6
Dry 2
Gas 6

FAIRFIELD COUNTY

Richland—Henry Reynolds, Patton & Bishop 2 gas
Berne—N. C. Hummel, City Natural Gas Works 1 gas
Robt. Fleming, City Natural Gas Works 2 gas

Wells completed 3
Gas 3

KNOX COUNTY

Brown—B. B. Workman, Upham Gas 1 gas
Union—J. H. Colopy, Hulse & Kundtz 3 gas
J. H. Colopy, Hulse & Kundtz 3 dry

Wells completed 3
Dry 1
Gas 2

GUERNSEY COUNTY

Cambridge—Chas. D. Johnson, W. C. Urban & Co. 1 dry
Jackson—John Brock, W. C. Urban & Co. 1 gas

Wells completed 2
Dry 1
Gas 1

BELMONT COUNTY

Somerset—Chas. McLaughlin, A. C. Peters & Co. 2 gas
H. B. and R. E. Mann, Central Gas 1 dry

Wells completed 2
Dry 1
Gas 1

LIMA FIELD

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Wood	1	0	0	1	0	0	0
Hancock	0	0	0	0	0	1	1
Allen	0	0	0	0	0	1	1
Mercer	0	0	0	0	0	1	1
Seneca	4	0	0	4	0	6	6
Lucas	0	0	0	0	0	2	2
Ottawa	0	0	0	0	0	2	2
Hardin	0	0	0	0	2	3	5
Henry	1	0	0	1	0	1	1
Shelby	0	0	0	0	0	1	1
Logan	0	0	0	0	0	1	1
Wyandot	3	15	1	1	1	2	3
Putnam	0	0	0	0	0	1	1
Darke	0	0	0	0	0	1	1
Huron	1	0	0	1	0	0	0
Total Sept.	10	15	1	8	3	23	26
Total Aug.	13	10	0	12	4	15	19
Difference	3	5	1	4	1	8	7

WELLS COMPLETED

WOOD COUNTY

Grand Rapids—Henry Keckley, Lake Shore & Southwestern Metal Co. 1. gas

HANCOCK COUNTY

Allen—Mahlon Decker, Ohio Oil 18, 19 abd
James Decker fee, Ohio Oil 1, 2, 4 abd
P. Alexander, Ohio Oil 21, 22, 33, 45 51 abd
Liberty—C. Ewing, Ohio Oil 4, 5, 7, 11, 14, 16 abd
John H. Grubb, Ohio Oil 6, 8, 11, 14 16 abd
Marion—C. & F. Urban, Ohio Oil 4, 6, 7 abd
John Blair, Ohio Oil 2, 3 abd
A. W. Spahr, Ohio Oil 6, 11, 12 abd
F. P. Blackford, Ohio Oil 3 abd

Abandoned 30

HENRY COUNTY

New Bavaria—Matt Thome, Lake Shore & Southwestern Metal Co. 1 gas

SENECA COUNTY

Hopewell—Mary Getuldig, J. H. Murphy & Sons 3 gas
Joseph Behn, J. H. Murphy & Sons 1 gas
Liberty—W. S. Summers, W. S. Summers 2 gas
Lawrence Sherger, Tiffin Industrial Gas 5 gas
Dave Hunker, J. H. Murphy & Sons 1, 2, 4

Wells completed
Gas
Abandoned

WYANDOT COUNTY

Tymochtee—Ella Walten, Cook, McPheron & Miller 1
B. D. Ramsbury, Cook, McPheron & Miller 2
F. Flechsenhar, John Greege & Co. 1.

Wells completed
Production
Dry
Gas

HURON COUNTY

Fitchville—Walter Rogers, Gebhart & Co. 1

INDIANA FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Huntington	0	0	0	0	0	2	2
Gibson	0	0	0	0	0	1	1
Pike	4	0	3	1	1	5	6
Daviess	1	0	0	1	0	7	7
Sullivan	0	0	0	0	0	1	1
Warrick	0	0	0	0	0	1	1
Spencer	0	0	0	0	0	5	5
Perry	0	0	0	0	2	8	10
Marshall	0	0	0	0	1	1	2
Lagrange	0	0	0	0	0	1	1
Knox	0	0	0	0	0	5	5
Putnam	0	0	0	0	0	1	1
Posey	0	0	0	0	0	1	1
Laporte	0	0	0	0	0	1	1
St. Joseph	0	0	0	0	0	1	1
DeKalb	0	0	0	0	0	1	1
Rush	0	0	0	0	0	1	1
Elkhart	0	0	0	0	0	1	1
Vandeberg	0	0	0	0	1	0	1
Hancock	0	0	0	0	0	1	1
Hamilton	0	0	0	0	0	1	1
Shelby	0	0	0	0	0	1	1
Dearborn	0	0	0	0	0	1	1
Dubois	0	0	0	0	0	1	1
Greene	1	0	0	1	0	0	0
Harrison	0	0	0	0	0	1	1
Crawford	0	0	0	0	1	0	1
Henry	0	0	0	0	0	1	1
Total Sept.	6	0	3	3	6	54	60
Total Aug.	11	5	7	3	7	50	57
Difference	5	5	4	0	1	4	3

WELLS COMPLETED

PIKE COUNTY

Washington—Sally Harmon, Eureka Gas & Oil Corp. 1 dry
S. T. Morgan, C. E. Wommer 1 gas
Ben McCord, Chas. C. Talliaferro, Jr., 1 dry
Jefferson—R. M. Craig, C. E. Wommer 1 dry

Wells completed
Dry
Gas

DAVIESS COUNTY

Harrison—Bernard Tilloogy, Ben D. Ruble 1 gas

GREENE COUNTY

Washington—Walter Suphin, Oild Dominion Corp. 1 gas

ILLINOIS FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Clark	0	0	0	0	0	2	2
Coles	0	0	0	0	0	1	1
Edgar	0	0	0	0	0	1	1
Crawford	0	0	0	0	2	1	3
St. Clair	0	0	0	0	0	3	3
Randolph	0	0	0	0	0	2	2
Monroe	0	0	0	0	0	2	2
Washington	0	0	0	0	0	1	1
Boone	0	0	0	0	0	1	1
Madison	0	0	0	0	0	2	2
Marion	1	0	1	0	0	0	0
Macoupin	1	0	1	0	0	0	0
Jefferson	0	0	0	0	0	1	1
Total Sept.	2	0	2	0	2	16	18
Total Aug.	2	20	1	0	2	18	20
Difference	0	20	1	0	0	2	2

WELLS COMPLETED

CRAWFORD COUNTY

Prairie—E. Cox No. 2, Ohio-Silurian Oil 1, 2, 3, 4, 5, 6 abd
Thos. Leverick, Ohio-Silurian Oil 1, 2, 3, 4, 5, 6, 7, 8, 9 abd

Abandoned 1

LAWRENCE COUNTY

Bridgeport—Perry King No. 2, Ohio Oil 3 abd
Petty—Jos. B. Lamb, Ohio Oil 4, 28, 47 abd
W. R. Crackle, Ohio Oil 23, 37 abd
Wm. Crump, Silurian Oil 4, 7 abd

Abandoned

ST. CLAIR COUNTY

Sugar Loaf—F. Phelps, C. Roques & Co. 1 abd
F. Showman, C. Roques & Co. 1 abd
H. Monnsett, James C. Ellis, 1, 2, 3, 4 abd
Margaret LaCroix, James C. Ellis 1, 2 abd
A. Dettenbach, James C. Ellis 1, 3, 4 abd
Chas. LaCroix, James C. Ellis, 2, 3 abd
S. & O. Dickey, Zeppenfeld & Prowers 1 abd
E. Keller lot, W. T. Thursby & Co. 1 abd
L. H. Weinert, Robt. A. Murray & Co. 1 abd
A. J. Paul, L. G. Blackman & Co. 1 abd
Grover Schlemmer, Leader Oil & Gas 1 abd
Pester Pullen, Wm. Lohman 1 abd

Abandoned 19

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The OIL and GAS JOURNAL

TULSA, OKLA.

MARION COUNTY

Centralia—H. W. Adams No. 2, Ohio Oil 1 ..... dry

MACOUPIN COUNTY

Dorchester—H. Woolridge, Duncan Machine & Foundry 1 ..... dry

MICHIGAN FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Isabella	3	200	1	1	27	35	62
Midland	5	6,500	0	0	13	16	29
Clare	1	0	1	0	2	2	4
Mecosta	0	0	0	0	1	0	1
Lake	0	0	0	0	1	0	1
Cass	0	0	0	0	0	2	2
Kent	0	0	0	0	1	2	3
Ottawa	0	0	0	0	1	1	1
Oceana	0	0	0	0	1	6	7
Bay	0	0	0	0	1	1	2
Mason	0	0	0	0	0	4	4
Newyago	0	0	0	0	0	5	5
Emmett	0	0	0	0	1	1	2
Eaton	0	0	0	0	1	0	1
Kalkasky	0	0	0	0	1	1	2
Iosco	0	0	0	0	2	0	2
Monroe	0	0	0	0	1	1	2
Lenawee	1	0	1	0	1	1	2
Washtenaw	0	0	0	0	0	1	1
Wayne	10	0	5	5	0	2	2
Missaukee	0	0	0	0	1	0	1
Delta	0	0	0	0	1	0	1
Montmorency	0	0	0	0	1	0	1
Van Buren	0	0	0	0	0	2	2
Sanilac	0	0	0	0	3	0	3
Gratiot	0	0	0	0	3	3	6
Shiawassee	0	0	0	0	2	2	4
Livingston	0	0	0	0	1	1	2
Allegan	0	0	0	0	0	6	6
Leelanau	0	0	0	0	1	0	1
Osceolo	0	0	0	0	0	2	2
St. Clair	0	0	0	0	1	0	1
Gennessee	0	0	0	0	1	0	1
Alpena	0	0	0	0	0	1	1
Cheboygan	0	0	0	0	0	1	1
Kalamazoo	0	0	0	0	0	1	1
Huron	0	0	0	0	1	0	1
Oakland	0	0	0	0	0	1	1
Total Sept.	20	6,700	8	6	70	101	171
Total Aug.	8	2,720	2	3	63	100	163
Difference	12	3,980	6	3	7	1	8

WELLS COMPLETED
ISABELLA COUNTY

Chippewa—Thompson-Borts, Mt. Pleasant Oil & Gas 1 ..... abd
Denver—Cole, Gibson-Johnson-Borden 2 abd
Marthey, Michigan Oil & Gas Corp. 3 abd
Vernon—E. L. Russell, Meridian Oil & Gas 1 200
Broomfield—A. T. Skarritt, Gas Producers, Inc., 1 ..... gas
Union—Chas. Marz, St. Clair Oil & Gas 1 ..... dry

Wells completed 3
Production 200
Dry 1
Gas 1
Abandoned 3

MIDLAND COUNTY

Greendale—George Purtell, Pure Oil 1..2500
Cassidy, Pure Oil 1 500
Iosco Land A, Pure Oil 1 1500
Adams, Talbot Oil Co. 1 1200
F. & P. McLaughlin, Columbia Oil & Gas 1 800

Wells completed 5
Production 6500

CLARE COUNTY

Hatton—State Bank land, John A. Mercier Co. 1 ..... dry

LENAWEE COUNTY

Riga—W. Farrow, D.O.H.I. Oil Co. 1 .. dry

WAYNE COUNTY

Van Buren—Scheffler, G. E. LeVeque 1. dry
J. W. Schweizer, G. E. LeVeque 1.... dry
Burt Riggs, G. E. LeVeque 1 ..... dry
James Ollett, G. E. LeVeque 1 ..... gas
Traskos, G. E. LeVeque 1, 3 ..... gas
Trascos, G. E. LeVeque 2 ..... dry
Bird, G. E. LeVeque 1 ..... dry
Joe Skszak, Joe Skszak 1 ..... gas
Fee, R. J. Kirkendall 3 ..... gas

Wells completed 10
Dry 5
Gas 5

ENGINEERING HANDBOOK

The second edition of Petroleum Engineering Handbook, 1206 South Maple Avenue, Los Angeles, Calif., is off the press. The book deals with processes, methods and practices in use in various oil fields and refineries in the United States and is a compilation of articles prepared by technical men each well versed in the methods followed in the particular branch of the industry covered by his article.

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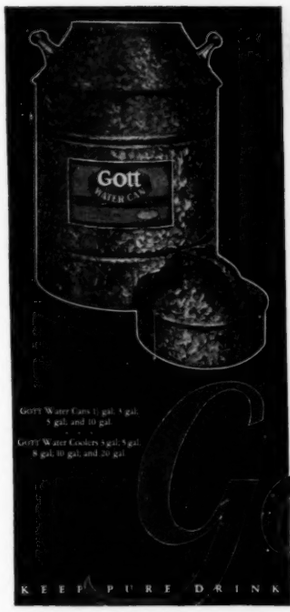

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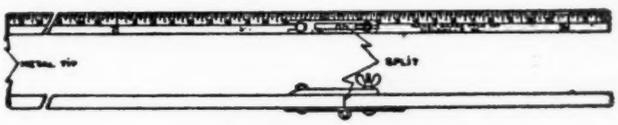

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Read the Classified Bargains on pages 76 and 77 of this week's issue.

Oklahoma-Kansas and Eastern Pipe Line Report

OKLAHOMA-KANSAS

Pipe Line Statement for August Runs

	Month (bbls.)	Dy. av. (bbls.)
Prairie P. L. Co.*	530,100	17,100
Gulf P. L. Co.	1,184,912	38,223
Texas P. L. Co.	424,977	13,709
Magnolia P. L. Co.	1,376,606	44,407
Empire P. L. Co.	1,303,455	42,047
Cosden P. L. Co.	584,860	18,866
Stanolind P. L. Co.*	1,556,200	50,200
Oklahoma P. L. Co.	1,987,099	64,100
Other lines	4,050,119	130,649
Total August	13,029,328	419,301
Total July	19,563,548	631,081
Difference	6,534,220	211,780

Shipments

Prairie P. L. Co.	3,413,618	110,117
Gulf P. L. Co.	1,621,578	52,309
Texas P. L. Co.	768,064	24,776
Magnolia P. L. Co.	1,312,642	42,343
Empire P. L. Co.	2,041,816	65,865
Cosden P. L. Co.	724,574	23,373
Stanolind P. L. Co.	3,672,415	118,465
Oklahoma P. L. Co.	2,957,638	95,408
Other lines*	6,758,000	218,000
Total August	23,270,345	750,656
Total July	23,149,033	746,743
Difference	121,312	3,913

Stocks

Prairie O. & G. Co.*	36,523,000
Gulf P. L. and Gypsy Oil Co.	8,658,769
The Texas Company	3,430,631
Magnolia Petroleum Co.	6,689,208
Empire P. L. Co.	4,082,258
Mid-Continent Petroleum Corp.	3,494,511
Stanolind Crude Oil Pur. Co.*	16,831,600
Oklahoma P. L. Co.	1,203,189
Carter Oil Co.	7,889,875
Other lines*	16,624,839
Total August	105,427,880
Total July	111,096,680
Difference	5,668,800

*Estimated.

EASTERN PIPE LINE REPORT FOR MONTH OF SEPTEMBER

Runs from Wells

In the following table will be found the regular receipts from wells by various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky, Illinois, Indiana and Michigan for August and September:

	Aug., 1931	Sept., 1931
Nat Trantist	121,756.53	145,864.04
S W Pa. P. L.	64,160.09	79,823.98
Eureka P. L.	274,238.96	306,199.28
Buckeye P. L. (Macksburg)	225,597.43	277,205.53
Buckeye P. L. (Cleveland)	11,149.05	12,190.61
Buckeye P. L. (Lima, etc.)	70,669.93	82,263.82
Indiana P. L.	2,600.03	2,703.99
Cumberland P. L.	146,239.07	145,866.70
N. Y. Transit	26,817.39	30,392.22
Tidewater P. L.	23,868.07	22,802.35
Pure Oil	217,524.86	292,400.07
Stoll Oil Ref.	58,043.70	29,470.48
Bradford Transit	363,931.05	415,169.77
Total	1,596,596.16	1,840,352.84
Daily average	51,503.10	61,345.09

Petroleum Deliveries

The following tables exhibit the shipments or regular deliveries of the various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for August and September:

	Aug., 1931	Sept., 1931
Nat. Transit	572,837.36	499,112.79
S W Pa P. L.	470,477.88	423,403.26
Eureka P. L.	493,173.50	372,988.75
Buckeye P. L. (Macksburg)	209,652.58	234,573.66
Buckeye P. L. (Cleveland)	2,191.00	1,944.16
Buckeye P. L. (Lima, etc.)	1,965,006.60	1,802,206.78
Indiana P. L.	1,146,141.55	909,359.87
Cumberland P. L.	97,247.87	115,316.63
Southern P. L.	67,327.53	70,722.76
N. Y. Transit	184,459.52	171,412.21
Northern P. L.	194,193.95	255,413.44
Tidewater P. L.	557,863.79	465,676.21
Pure Oil	233,792.38	222,738.09
Bradford Transit	365,531.21	480,695.64
Tuscarora	479,254.08	500,545.93
Total	6,949,150.80	6,526,110.18
Daily average	224,166.16	217,537.01

Gross Stocks

The gross stocks held by various pipe lines in the oil-producing sections of New York, Pennsylvania, West Virginia, Ohio, Indiana and Kentucky at the close of August and September:

	Aug., 1931	Sept., 1931
Nat. Transit	709,462.64	749,274.20
S W Pa. P. L.	437,987.83	404,189.10
Eureka P. L.	1,604,025.48	1,445,855.17
Buckeye P. L. (Macksburg)	304,905.35	347,122.32
Buckeye P. L. (Cleveland)	41,579.11	39,616.26
Buckeye P. L. (Lima, etc.)	2,982,405.14	2,778,403.92
Indiana P. L.	507,328.32	523,814.43
Cumberland P. L.	621,498.00	69,282.55
Southern P. L.	206,524.98	219,384.72
N. Y. Transit	117,899.23	108,612.34
Northern P. L.	247,413.61	208,028.03
Tidewater P. L.	862,114.87	924,216.84
Pure Oil	410,582.85	485,055.55
Tuscarora	12,283.66	11,544.91
Bradford Transit	126,446.26	178,031.09
Total	9,192,457.33	8,492,431.43
Decrease	377,392.45	700,025.90

Grades of Oil

The following table shows the amount of the different grades of oil held by the Eastern pipe lines at the close of August and September, showing gross stocks of the above fields:

	Aug., 1931	Sept., 1931
Pennsylvania	3,104,338.44	3,054,494.51
Lima	711,235.85	664,893.87
Kentucky	632,038.36	79,690.06
Mid-Continent	3,343,664.94	4,202,724.97
Illinois		15,643.58
Michigan	401,179.74	474,984.44
Total	9,192,457.33	8,492,984.44

Daily Average Runs

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil fields for the past four years:

	1928	1929	1930	1931
January	52,904	51,749	75,907	53,939
February	57,002	51,833	79,256	55,163
March	57,485	54,252	76,688	54,331
April	56,812	58,444	84,536	54,914
May	62,067	59,902	70,546	53,344
June	58,230	58,833	75,430	54,110
July	57,144	66,087	68,921	50,723
August	57,745	66,087	54,291	51,503
September	53,487	67,315	56,595	61,345
October	58,100	76,093	58,179	
November	53,865	74,831	52,332	
December	52,025	74,561	53,999	

Daily Average Shipments

The following table gives daily average shipments from the Pennsylvania, Lima and other fields for the past four years:

	1928	1929	1930	1931
January	146,465	165,721	217,623	175,369
February	167,368	159,387	224,355	183,494
March	158,883	161,474	228,846	189,508
April	172,935	169,737	241,845	191,450
May	180,559	184,281	248,383	199,247
June	188,024	185,404	234,401	221,155
July	189,470	194,763	207,094	211,632
August	192,853	194,946	205,506	224,166
September	194,138	201,214	193,999	217,537
October	176,000	191,367	157,675	
November	176,898	202,743	146,638	
December	173,572	186,257	143,001	

Gross Stocks

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields including oil received from other lines at the close of each month for the past three years:

	1929	1930	1931
January	7,596,564	12,220,045	11,831,0
February	8,738,835	12,991,561	11,504,4
March	9,062,058	13,247,217	11,012,3
April	8,978,172	13,233,961	11,944,4
May	8,903,560	13,052,953	10,728,2
June	8,921,275	13,396,855	9,803,2
July	9,211,565	13,268,562	9,549,3
August	9,440,643	13,047,051	9,192,4
September	9,443,067	12,812,018	8,492,4
October	9,441,101	12,437,555	
November	9,868,538	11,851,380	
December	11,253,953	11,751,952	

The Illinois Field

The following table gives the report of the Illinois Pipe Line Co. in Illinois:

	Bbls.
Gross stocks, Oct. 1	545,39
Runs from wells	469,381
Other receipts	72,04
Regular deliveries	300,45
Other deliveries	233,15

The amount of Illinois oil run by the Tidewater Pipe Line Co. in September was 22,802.35 bbls. Deliveries were 22,526.21 bbls. Adding these figures to those of the Illinois Pipe Line Co. makes the runs and deliveries as follows:

	Runs	Deliveries
1931—		
September	492,183.83	323,012
1930—		
January	543,387.95	498,29
February	548,416.32	414,55
March	631,944.49	469,11
April	530,074.22	509,30
May	605,147.37	504,06
June	572,662.57	468,65
July	604,529.54	388,45
August	594,642.12	375,74
September	457,001.11	371,69
October	478,442.12	320,68
November	422,794.68	355,40
December	556,418.78	363,71
1931—		
January	468,429.04	669,57
February	429,284.54	461,26
March	424,638.23	356,66
April	421,814.98	282,53
May	433,231.80	322,51
June	510,805.78	320,25
July	520,009.38	289,21
August	476,623.56	393,23

Tidewater Pipe Co., Ltd., also delivered in September 124,993.66 bbls. of Oklahoma oil.

AVERAGE DAILY RECEIPTS OF CALIFORNIA CRUDE AND REFINED OIL AT ATLANTIC AND GULF PORTS

Average barrels per day in 1930-31—	Atlantic Ports: Baltimore	Boston	New York	Philadelphia	Others	Total	Gulf Coast Ports: Galveston	New Orleans, Baton Rouge	Port Arthur Sabine Pass	Tampa	Total	Total all ports
September	6,300	6,400	25,600	13,400	9,567	61,267	.....	.....	.....	.....	2,433	63,70
October	2,516	3,065	27,258	16,419	4,903	54,161	.....	.....	.....	.....	5,355	59,51
November	8,367	6,233	33,800	17,733	4,600	70,733	.....	.....	.....	.....	4,800	75,53
December	5,516	4,323	30,645	9,678	3,580	53,742	.....	.....	.....	.....	4,645	58,38
January	8,387	6,613	21,968	14,678	11,096	62,742	.....	.....	.....	.....	6,129	68,87
February	5,787	3,713	29,143	4,000	5,750	47,393	.....	.....	.....	.....	3,750	51,14
March	10,032	1,611	21,338	7,324	8,774	49,129	.....	.....	.....	.....	6,355	55,48
April	5,133	.....	19,200	16,500	10,067	50,900	.....	.....	.....	.....	4,000	54,90
May	4,452	3,064	19,903	11,226	6,258	44,903	.....	.....	.....	.....	2,355	47,25
June	4,267	.....	25,100	6,333	3,500	39,200	.....	.....	.....	.....	.....	39,20
July	6,774	1,194	24,612	11,065	9,902	53,548	.....	.....	.....	.....	1,335	54,88
August	3,452	.....	16,419	7,419	4,290	31,580	.....	.....	.....	.....	968	32,54

AVERAGE DAILY IMPORTS OF CRUDE AND REFINED OIL AT PRINCIPAL UNITED STATES PORTS

Average barrels per day in 1930-31—	Atlantic Ports: Baltimore	Boston	New York	Philadelphia	Others	Total	Gulf Coast Ports: Galveston	New Orleans, Baton Rouge	Port Arthur Sabine Pass	Tampa	Total	Total all ports
September	38,867	8,533	150,933	34,500	25,567	258,400	6,433	12,234	.....	3,800	22,467	280,86
October	19,839	11,742	146,194	35,355	26,967	240,097	6,065	7,067	2,774	2,545	18,451	258,54
November	39,633	35,900	124,633	36,467	24,667	261,300	2,467	7,366	.....	1,767	11,600	272,90
December	21,419	14,033	122,774	32,839	33,774	224,839	6,290	10,613	3,097	290	19,290	244,12
January	17,613	13,519	154,225	32,902	30,612	248,871	2,032	11,677	3,097	3,097	18,903	267,77
February	31,321	16,929	127,786	31,714	26,857	234,607	4,536	11,571	.....	536	16,643	251,25
March	27,645	13,935	141,160	26,290	21,129	230,161	4,065	2,580	.....	1,968	8,613	244,77
April	35,000	10,533	105,000	29,767	35,533	215,833	2,733	3,400	.....	.....	6,133	221,96
May	30,129	8,774	107,000	25,452	26,710	198,065	.....	2,000	.....	.....	2,000	200,06
June	30,067	10,833	111,767	27,000	20,833	200,500	3,300	5,500	2,167	1,333	12,300	212,80
July	36,387	11,226	104,678	29,323	21,773	193,387	6,903	7,419	4,194	.....	18,516	211,90
August	32,613	15,581	91,742	22,387	25,741	188,064	4,161	2,516	.....	3,162	9,839	197,90

GROSS PRODUCTION OF CRUDE OIL IN THE UNITED STATES FOR 12 MONTHS

(In Barrels of 42 Gallons)

		California	Oklahoma	Texas	Kansas	Arkansas	Louisiana	Rocky Mts.	Eastern	Total
1930—										
September:	Month	17,984,306	16,509,120	23,111,822	3,405,510	1,583,280	2,008,060	3,239,010	3,396,000	71,237,10
	Daily average	599,477	550,304	770,394	113,517	52,776	66,935	107,967	113,200	2,317,57
October:	Month	18,244,052	16,632,523	23,626,553	3,517,913	1,636,552	2,142,885	3,225,050	3,627,000	72,707,02
	Daily average	588,518	536,533	762,147	115,223	52,792	69,125	104,050	117,000	2,345,38
November:	Month	18,109,459	14,941,770	22,036,222	3,459,330	1,557,870	2,136,948	2,957,100	3,222,000	68,419,69
	Daily average	603,648	498,059	734,507	115,311	51,929	71,231	98,570	107,400	2,280,65
December:	Month	17,786,728	15,057,103	21,810,359	3,432,661	1,590,951	2,157,534	3,118,663	3,328,000	68,281,99
	Daily average	573,765	485,713	703,560	110,731	51,321	69,598	100,602	107,355	2,202,64
1931—										
January:	Month	16,485,738	14,850,953	20,019,212	3,432,475	1,574,955	2,135,037	2,966,142	3,374,000	64,838,51
	Daily average	531,798	479,063	645,781	110,725	50,805	68,872	95,682	108,839	2,091,64
February:	Month	14,930,932	13,531,980	18,957,571	3,341,016	1,402,492	1,981,616	2,747,024	3,129,000	60,021,63
	Daily average	533,248	483,285	677,057	119,322	50,089	70,772	98,108	111,750	2,143,63
March:	Month	16,364,842	16,627,687	22,453,619	3,498,598	1,469,245	2,061,576	2,898,035	3,374,000	68,747,60
	Daily average	527,898	536,377	724,310	112,858	47,395	66,502	93,485	108,839	2,217,66
April:	Month	15,803,541	16,315,990	26,887,717	3,281,850	1,412,220	2,008,021	2,901,870	3,273,000	72,384,33
	Daily average	526,785	559,255	896,257	109,396	47,074	66,934	96,729	109,100	2,412,90
May:	Month	16,448,960	17,333,867	28,708,684	3,341,366	1,446,274	2,232,568	3,098,419	3,190,000	75,800,13
	Daily average	530,612	559,157	926,086	107,786	46,654	72,018	99,949	102,900	2,445,16
June:	Month	15,641,436	16,678,200	29,139,833	3,175,440	1,344,450	1,850,511	2,986,200	3,166,000	73,983,07
	Daily average	521,381	555,940	971,327	105,848	44,815	61,684	99,540	105,533	2,466,09
July:	Month	16,093,322	16,467,789	33,827,213	3,090,762	1,287,430	1,715,730	2,905,909	3,341,000	78,729,15
	Daily average	519,139	531,219	1,091,200	99,702	41,530	55,346	93,739	107,774	2,539,65
August:	Month	15,668,984	9,678,510	32,279,816	3,148,887	1,165,445	1,584,444	2,807,143	3,167,000	69,500,23
	Daily average	505,451	312,210	1,041,284	101,577	37,595	51,111	90,553	102,161	2,241,94
Total 12 months		199,562,301	185,125,492	302,857,621	40,179,838	17,471,164	24,014,930	35,851,065	39,587,000	844,649,41
Daily average		546,746	507,192	829,747	110,082	47,866	65,794	98,222	108,458	2,314,18